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REPORT ON SUSSEX CENTRAL HIGH SCHOOL

On behalf of

INDIAN RIVER SCHOOL DISTRICT
SELBYVILLE, DELAWARE

In the matter of

RLI Insurance Company
vs.
Indian River School District and EDIS Company and Becker Morgan Group, Inc.

Volume I **Narrative** **August 31, 2007**

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3	8/27/04	Letter from EDiS to McDaniel
4	9/29/04	Letter from EDiS to McDaniel re: Removal from Working on Heating System
5	8/10/04	Construction Progress Meeting Minutes No. 52
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Exhibits

Exh. No.	Date	Document Description
109	6/30/05	Letter from Zimmer to EDiS re: Sussex Central High School Penthouse Work
110	9/9/04	Letter from CSF to EDiS

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I. Introduction

On August 28, 2002 McDaniel Plumbing & Heating, Inc. ("McDaniel") was awarded the SC-B-14 Contract for the Mechanical, Plumbing and Automatic Temperature Controls ("ATC") scope of work at the new Sussex Central High School ("Project") located in Georgetown, Delaware (Exhibit 1). The Project Owner, the Indian River School District ("IRSD") and McDaniel entered into a Contract for a stipulated sum value of $4,335,500.00 which included the base bid as well as Alternates 1, 2, 3, 4 and 5. The pre-bid construction schedule incorporated in the Project Specifications indicated a Construction Start milestone date of July 30, 2002, a Substantial Completion milestone date of May 31, 2004 and Project Completion milestone date of August 2, 2004 (Exhibit 2).

The 175,750 square foot new high school Project contains an administrative wing ("A"), three two-story classroom wings ("C, D, E"), a gymnasium, cafeteria and kitchen wing ("F") and a vocational education and auditorium wing ("B"). Construction, as originally specified, consisted of concrete footings and piers, slab on grade, one and two-story structural steel framing, EPDM roofing, exterior brick veneer and metal panels, aluminum storefront and curtainwall and interior CMU and metal stud partitions. The new high school included science rooms, computer rooms, art rooms, business labs, special education rooms, a media center, technical education labs, agricultural labs, an auditorium, gymnasiums, a training/weight room, a kitchen and a cafeteria as well as traditional classrooms. Diagram A provides a graphic layout of the Project and the location of the various wings.

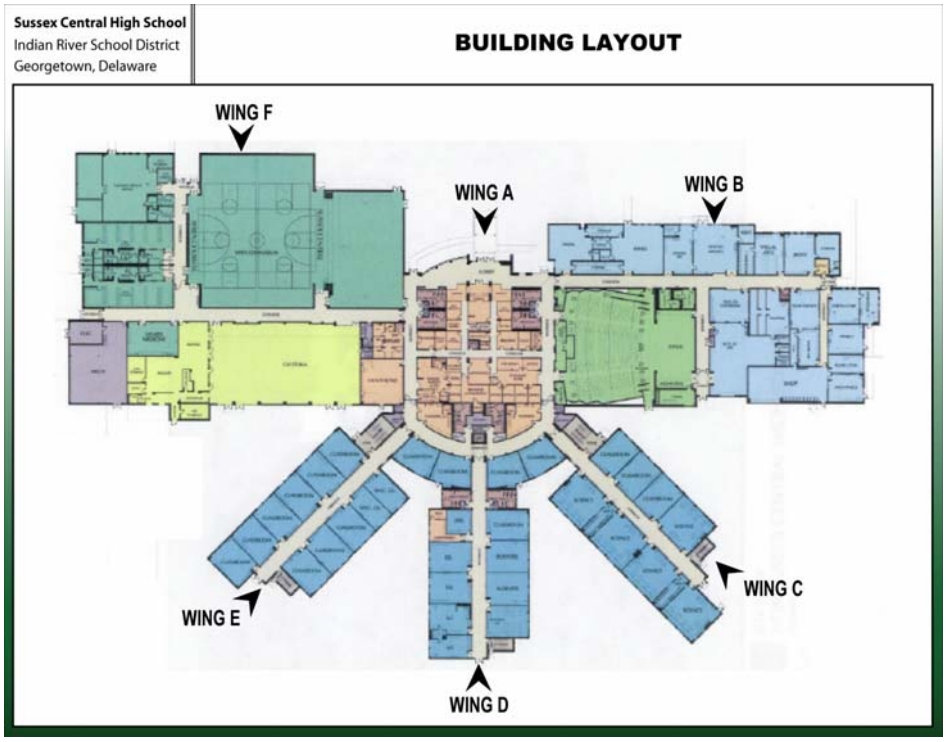

Diagram A – Building Layout

The Project Architect was Becker Morgan Group, Inc. ("Architect"); the Mechanical, Plumbing and Electrical Engineer was Allen & Shariff Corporation ("Engineer"); and the Construction Manager was EDiS Company ("CM").

The Project was bid as a multiple prime project with each major trade contractor contracting directly with IRSD and the Project construction being managed by the CM. As noted above, McDaniel was awarded the Contract to perform the Mechanical, Plumbing and ATC scope of work generally consisting of labor, material and equipment for the underground plumbing, sanitary and storm piping within the footprint of the six wings of the Project, the building storm drain system, the domestic hot and cold water systems, the sanitary and laboratory waste systems, the heating, ventilating and air conditioning ("HVAC") distribution systems and the ATC systems. The Project included seven mechanical penthouses containing air handling units and fans; a mechanical

room containing boilers, domestic hot water heaters, a domestic water storage tank, expansion tanks, a glycol feed system, a chemical feed system and various pumps; and an exterior mechanical courtyard with a cooling tower, three thermal storage units, a fuel oil tank and associated piping and a pump house.

The Project was completed for school to open on or about September 7, 2004 as originally planned by IRSD. Although the school opened on time in the Fall of 2004, several areas of work were incomplete at that time. Specifically, mechanical work associated with the penthouses, boilers and punchlists for the occupied portion of the building required attention as well as the completion of the entire B Wing. On August 27, 2004 the CM notified McDaniel that their workforce was being supplemented for the work associated with penthouses A301, C301, D301, E301 F301 and F302 (Exhibit 3). The letter continued, stating:

> This is not a termination of your contract. You are required to diligently pursue the completion of work in other areas of the building and pump house.

Preparations were being made by IRSD and the CM to have the work in the penthouses supplemented by a separate mechanical contractor as school opened in early September 2004. Later, on September 29, 2004, the CM notified McDaniel their workforce was again being supplemented, this time for the work associated with the boilers, fuel oil piping and related items necessary to get the heating system operational (Exhibit 4). Again, the letter stated:

> This is not a termination of your contract. You are still required to diligently pursue the completion of work [in] other areas of the building, except the penthouses.

In addition, B Wing, the vocational education and auditorium wing, which had been deferred[1] on or about August 10, 2004 pending completion of work in the other five

[1] See Item 52.2.1 – "All work and punch list in Areas "C", "D", "E", "F" and "A" must be done by 8/20/04. All contractors were advised to not do any work in Area "B" until all other areas are complete."

wings of the building (Exhibit 5), was only at the rough-in stage of completion. Subsequent to the school opening in early September 2004, McDaniel was afforded the opportunity to complete the remaining mechanical work on the Project but their level of manpower was insufficient to maintain progress with the other trades and their Contract was terminated on October 11, 2004 for poor workmanship and failure to maintain adequate manpower (Exhibit 6).

On September 8, 2004, Joseph M. Zimmer, Inc. ("Zimmer") had been authorized to proceed with emergency work associated with penthouses A301, C301, D301, E301, F301 and F302 (Exhibit 7). On September 29, 2004, Zimmer had been authorized to proceed with the work required to make the heating system fully functional (Exhibit 8).

Following the termination of McDaniel, RLI Insurance Company ("RLI"), the company that provided both the Performance and Payment Bonds on behalf of McDaniel, was requested to step in and complete McDaniel's remaining scope of work on the Project. Upon their review of the Project, RLI refused to step in and complete the remaining mechanical, plumbing and ATC scope of work and IRSD was forced to complete that work itself.

On December 23, 2004, Zimmer was authorized to proceed with the installation of ductwork above the auditorium necessary for follow-on work to proceed (Exhibit 9). On January 5, 2005 Zimmer was authorized to proceed with both the performance of punchlist items identified by the Architect and Engineer in the A, C, D, E and F Wings of the building and with the water treatment system and glycol feed system (Exhibit 10). IRSD decided that the most cost effective method of completing the remaining B Wing scope of work was to re-bid. On January 27, 2005 Tri-State Technologies, Inc. ("Tri-State") was awarded Contract SC-D-25 for the remaining B Wing Mechanical, Plumbing and ATC scope of work in the amount of $603,200.00 (Exhibit 11).

II. Scope of Assignment

In April 2007, IRSD retained the construction consulting firm of FTI Consulting / Brower, Kriz and Stynchcomb ("FTI/BKS") to review the Project record, to critique any expert reports submitted by RLI and to prepare an independent analysis and expert report regarding the failure of RLI to take over and complete McDaniel's scope of work following their termination on October 11, 2004.

FTI/BKS is a construction consulting firm specializing in the development and updating of critical path method ("CPM") schedules and in the identification and quantification of schedule delay and loss of labor productivity. The qualifications of the writer are included herein at Exhibit 12.

The scope of work for FTI/BKS in preparing this report included the review of the Cashin Spinelli & Ferretti, LLC ("CSF") and Progressive Construction Management, Inc. ("PCM") reports as well as the SC-B-14 Mechanical, Plumbing and ATC Contract, General Conditions, Supplementary Conditions, Drawings and Specifications. In addition, we reviewed progress meeting minutes, buildings and grounds progress meeting notes, IRSD Board of Education regular and executive session meeting minutes, monthly progress reports, McDaniel's certified payrolls, McDaniel's daily reports, McDaniel's payment applications, contemporaneous Microsoft schedules and two-week look-ahead schedules, submittal logs, mechanical shop drawing files, Zimmer daily reports, Zimmer payment applications, Tri-State payment applications, depositions and correspondence produced from the files of IRSD, the CM, the Architect, the Engineer, Zimmer, Tri-state, Chesapeake Testing & Balancing Engineers, Inc. ("Chesapeake"), RLI and CSF. In addition, we reviewed the SC-D-25 B Wing Mechanical & Plumbing Contract, Drawings and Specifications.

Pursuant to the requirements of Federal Rule of Civil Procedure 26(a)(2)(B) we have provided, through counsel, a complete list of all data and other information considered in forming our opinions. On August 17, 2007, Mr. Amadio notified other parties involved in this litigation that the documents we considered were available for review in the FTI/BKS Rockville, Maryland office (Exhibit 97). A list of the documents was attached to the correspondence[2].

The exhibits used as a summary of or in support of our report and opinions are included in Volumes II and III of this report.

The qualifications of the writer and a listing of the cases on which expert witness testimony was offered at trial, arbitration or deposition within the past four years is included in Exhibit 12 of this report.

FTI/BKS has expended approximately 400 consulting hours on this assignment through the writing of this report. We have billed approximately $39,500.00 at a blended consulting rate of $233.00 per hour. FTI/BKS expects to continue to invoice and to be paid at the blended rate listed above through deposition and trial.

III. FTI/BKS Findings Regarding PCM's Project Impact Claim

FTI/BKS has had an opportunity to review the Project record, PCM's report dated July 30, 2007 and CSF's report dated July 31, 2007. Detailed responses to the PCM and CSF reports are found in Sections V and VI, respectively. The following is a summary of our findings as they relate to the issues discussed by PCM. Section IV is a summary of our findings as they relate to the issues discussed by CSF.

[2] In addition to the attached list, we have also received and read the depositions of Timothy Edward Winship, Brad A. Hastings, Gregory C. Weer, Patrick C. Miller and David S. Berry.

A. Impact Analysis Methodology

While PCM never articulated their analysis methodology, it appears that they have attempted to prepare an impact analysis that is a variant of what is commonly referred to as a "time impact" or "windows" analysis. When prepared properly, this method of evaluating project impacts, i.e. time impact or windows analysis, is a valid approach. However, PCM did not use generally accepted practices in preparing their analysis and therefore their results are incorrect. These types of analyses are based on a reasonable as-planned CPM schedule. As the project progresses, the as-planned CPM schedule is updated just prior to the onset of the project delay that is to be examined. In updating the CPM schedule just prior to the occurrence of the delay, one is able to identify the current project critical path[3]. The updated schedule is then modified, incorporating the delaying event. The incorporation of this modification may or may not impact the end date of the project based on the location of the project's critical path and the relationship of the delay to that critical path. When the next delay is reviewed, the project schedule is again updated to just prior to the onset of that next delay to again identify the revised current project critical path. The updated schedule is then modified with the second delay and reviewed to see if that delay may have impacted the project end date.

While these approaches have been accepted by courts and boards, care must be taken to assure that during the period of analysis of a particular delay, other delays that may be the responsibility of the contractor or owner do not overtake the delay being reviewed on the critical path. The way to avoid this situation is by using frequent measuring points such as monthly updates. This allows the fact finder to not only see the critical path at the beginning of the delay, but to also confirm the actual impact of the

[3] Critical path is defined as the longest chain or path of activities through a CPM network. The critical path determines the length of a project. Absent any type of mitigation, the delay of any one of the activities on the project critical path will create a day for day corresponding delay to the completion of the project.

delay by reviewing the actual progress of the project at the end of the update period and the history of actual events of the project during the period.

A key to performing viable time impact or windows analyses is a reasonable as-planned CPM schedule and contemporaneous CPM updates performed at monthly intervals to provide frequent measuring points. While the time impact methodology was originally developed to allow time adjustments to a construction contract in a timely manner and to assist in resolving disputes prior to the completion of the project, it can also be used in after-the-fact analyses re-constructed after the completion of the project. In performing any time impact analysis, the electronic scheduling data files for the as-planned schedule, as well as the contemporaneous updates, are vitally important. The electronic data files provide the underlying schedule logic for the as-planned CPM schedule and the contemporaneous schedule progress and logic adjustments and/or revisions made throughout the course of a project. That updated progress and logic adjustments and/or revisions has the very likely possibility of creating changes to the project critical path. The critical path of a project is not static; it is constantly changing throughout the course of a project, depending on a myriad of factors.

As noted earlier, impact to the critical path of the project is the key element in establishing whether a particular event has impacted the completion date of the project. Events that simply consume available float[4], do not impact on the project's completion and therefore are not considered for time extensions.

[4] Float is defined as the amount of time that an activity can be delayed without impacting the critical path and therefore project completion.

B. PCM Schedule Analysis

As is explained in greater detail in Section V, PCM has several significant problems with their schedule analysis methodology. First and foremost is their selection of the baseline as-planned schedule. PCM has utilized the pre-bid construction schedule found in Specification Section 01305 – Construction Schedule (Exhibit 2). The Contract incorporates the pre-bid construction schedule to provide milestone dates for the start of construction, substantial completion and final Project completion. The pre-bid construction schedule contains only seventeen construction activities with durations of those activities ranging from one month to nineteen months.

The lack of detail, or "simplicity" as PCM refers to it on page four of their report, creates significant problems in performing an analysis. The extremely long duration activities do not provide an accurate representation of how the project is to be constructed nor does it provide an accurate indication of the project's critical path. For example, in subsequent schedules, the CM separated the sixteen month mechanical and plumbing activity shown in the pre-bid construction schedule into many piping, ductwork, equipment, insulation and trim activities in each of the six wings of the building. These construction schedules prepared by the CM have many hundreds of activities, providing much greater detail. That greater detail provides a greater insight into the Project's critical path.

In addition, the schedule diagram indicated that most of the seventeen construction activities did not contain logic that would qualify the schedule as a complete CPM schedule. For example, the sixteen month mechanical and plumbing activity did not contain successor logic[5] that would provide the relationship of the

[5] Logic is the connection of schedule activities through either predecessors, logic that affects when the activity may start, or successors, logic that affects when the following activity may start.

completion of the mechanical and plumbing work to other activities in the overall project. The ten month finishes activity did not contain either predecessor or successor logic. The activity was simply placed in a particular location in much the same way a bar chart would place activities. The lack of schedule logic would be a major impediment in performing a CPM time impact analysis.

We do not believe that PCM had electronic data files available for any of the schedules produced by the CM during the Project. Although we requested the electronic data files for all of the CPM schedules generated for the Project the CM was unable to locate the majority of them. We received no electronic data files for schedules created prior to July 2003. As noted earlier, the electronic data files are vitally important in being able to follow the contemporaneous scheduling process through the construction of the Project. The electronic data files also allow the consultant to review the project critical path throughout the construction of the Project.

PCM re-created the seventeen activity pre-bid construction schedule on page five of their report. In order for the re-creation to identify a critical path it was necessary for them to incorporate schedule logic that was missing from the pre-bid construction schedule found in the Project specifications. While we are not as concerned with a consultant providing logic necessary to create a proper CPM schedule, PCM went further and changed logic that was clearly established in the schedule found in the Project specifications. PCM also incorporated logic that impacted the results of their findings later in their report. For example, as noted above, the finishes activity did not have any predecessors or successors in the pre-bid construction schedule. PCM added a predecessor from roofing with a one month lag. The importance of the one month lag is that regardless of what happened during the course of PCM's analysis, the finishes could never start until one month after the completion of the roofing. Notwithstanding the fact that the inclusion of such a lag makes no scheduling sense, the Project record

will show later on through actual progress that the one month lag is not reasonable. We agree that the finishes activity should have been logically connected, but in our opinion, a more reasonable connection would have been from the start of metal studs and drywall. In addition, PCM does not connect all the activities in their re-creation. PCM's re-creation leaves the site work and utilities, the masonry walls above grade and the curtainwall and windows activities without successors.

One final note on the re-created pre-bid construction schedule prepared by PCM is with respect to the Project critical path. The critical path created by PCM's inclusion of their logic into the pre-bid construction schedule shows the critical path starting on February 23, 2003, approximately seven months into the planned construction. The building pad, footers and foundations, underslab utilities, and slab on grade were not on the critical path as portrayed by PCM. In our opinion, that portrayal of the critical path in the pre-bid construction schedule is not correct.

In preparing their many impact schedules, PCM has extracted pieces of construction progress information, for a limited number of activities, from the schedules, correspondence or construction progress meeting minutes and changed the start or finish of particular activities in the pre-bid construction schedule. Following those changes of select activities, they re-calculated the project schedule that they have created and identified the resulting impact. As noted earlier, in performing time impact analysis, it is imperative that one reviews the entire progress of the project, both prior to the impact and following the insertion of the impact. PCM has ignored much of the progress of work not associated directly with the activities they reviewed in each of their impact periods. In addition, the duration of the activities in PCM's baseline schedule are so great that it would be impossible for any impact on a critical scope of work not to impact the project completion. For example, because of the lack of detail in the schedule, any impact, on any finishes scope of work would impact the project

completion date in PCM's schedule. A one week delay to the setting of toilet partitions in the D Wing would impact the completion of the Project by one week. In reality, that situation is not reasonable.

PCM failed to consider the impact of McDaniel's late work that was consistently reported in the construction progress meeting minutes. Section V.J herein provides a commentary regarding promises of completion by McDaniel regarding the submittal of duct shop drawings and subsequent fabrication and installation of ductwork and their failure to meet those promises. Section V.K herein provides a commentary on the promises of completion by McDaniel regarding the heating system and penthouses and their failure to meet those promises. PCM has ignored the potential impacts by McDaniel by not including that information into their impact schedules.

C. FTI/BKS Schedule Analysis

The lack of electronic data files for the contemporaneous Project scheduling performed by the CM would have had a negative impact on our ability to perform a CPM based schedule analysis as well. We cannot stress enough the importance of having contemporaneous data that provides the details of the scheduling process as it occurs. It is extremely difficult to "step into the shoes" of the scheduler and to understand subtle CPM schedule adjustments and/or revisions made during the course of construction. Most of the hard copy reports that were presented by the CM throughout the Project did not contain information regarding schedule logic or total float[6]. Reports with the logic and total float identified would have provided FTI/BKS with a starting point that we would have used in an attempt to re-create the CPM schedules prepared by the CM.

[6] The total float provided in a CPM schedule report will often times allow a scheduling consultant to follow the current project critical path. The reports issued by the CM did not contain this information.

Following our review of the pleadings in the case, the fact that, with the exception of B Wing, the school opened as scheduled and that McDaniel was terminated for poor workmanship and lack of manpower and not for delaying the Project to October 11, 2004, we concluded that a CPM based schedule analysis was not relevant. In addition, McDaniel had not presented a notice of delay or delay analysis to the Architect since January 3, 2003, the date on which they mobilized on the Project.

Had it been necessary for FTI/BKS to perform a CPM based schedule analysis and given the lack of electronic data files, it would have been necessary for us to re-create the proper baseline schedule. As stated in Section V, we believe that the November 18, 2002 schedule forwarded to all contractors was the initial baseline schedule (Exhibit 13). The November 18, 2002 schedule contained progress, therefore it would have been necessary to de-progress the schedule to determine what the Project end date and critical path would have been on day-one with the activities and logic contained in that schedule. It is important to note that the November 18, 2002 schedule was still not a fully developed schedule. A review of the activities in that schedule reveals that the schedule provides a sufficient level of detail through the building enclosure and mechanical, electrical and fire protection rough-ins. Following those activities the schedule provides summary information for the interior metal studs and drywall, carpentry and general works, finishes and mechanical, electrical and fire protection finishes and trim. This project was bid in various stages, therefore the CM expanded the finishes activities that followed the building enclosure in schedules issued after contracts were awarded and the contractors input for scheduling was received. In an analysis, the expanding of the schedule detail would have been done as part of the updating process, as it was done contemporaneously.

Following our electronic re-creation of the November 18, 2002 schedule, it would then be necessary to review the Project record for delays, update the re-created

baseline schedule, for all progress on the Project, to the period just before the first delay to determine the current critical path. We would then have input the delay and re-run the schedule to determine the impact of the delay on the then current CPM update. We would have repeated that process through the entire Project. As known schedule adjustments and/or revisions were incorporated into the schedule updates, we would also incorporate those changes in our updating.

We have described the accepted methodology for preparing this type of analysis: select a proper baseline schedule, update all progress to determine the critical path, input the delay, and recalculate the schedule to determine the impact of the delay on the critical path. PCM did not review contemporaneous updates, schedule adjustments or revisions in preparing their analysis nor did they follow the accepted methodology described above in order to determine the impact of alleged delays on the Project's critical path.

D. Summary

In our opinion, the pre-bid schedule utilized by PCM was the incorrect baseline schedule because of its lack of detail, activity durations and the Contract documents indicating that it was to be used only for information regarding milestone dates. The discussion regarding the proper baseline schedule is found in Section V herein. In addition, PCM failed to consider the Project progress status of all activities when creating their impact schedules. That is a fatal flaw in our opinion and therefore their schedule analysis has no merit.

IV. FTI/BKS Findings Regarding CSF's Bond Claim Investigation

A. Payment Application Process

CSF states in their report that both the CM and the Architect were responsible for reviewing and certifying the completeness and quality of McDaniel's work. We agree with that assessment and our review of the Project record indicates that the CM and the Architect did review the payment applications in conjunction with the progress of the work in the field prior to their certification.

The typical process for submission of payment applications on a construction project is for the contractor to submit, to the CM, a "pencil copy" for their review. The CM then reviews the "pencil copy" and makes any adjustments required pursuant to their review of the work in the field. The marked up "pencil copy" is returned to the contractor for the CM's corrections to be made and the final payment application is prepared, certified by the contractor and submitted to the CM. The CM makes a final review and barring any additional changes, certifies the payment application and forwards it to the Architect for their review and certification. Following the Architect's certification the payment application is submitted to the owner for payment.

The Contract is clear; once the payment application is certified by the CM and Architect, the Owner must issue payment within the time prescribed by the Contract. The Owner does not have the option to further review or make adjustments to the certified payment application. The General Conditions for the Contract for Construction (Exhibit 14), Article 9.6.1 state:

> After the Construction Manager and Architect have issued a Project Certificate for Payment, the Owner shall make payment in the manner and within the time provided in the Contract Documents, and shall so notify the Construction Manager and Architect.

Our review of the Project record shows that the payment application process on this Project was similar to that in the industry as a whole. The following is a review of several payment applications.

With regard to the payment application process for Application and Certificate for Payment No. 19, McDaniel submitted the "pencil copy" to the CM on April 28, 2004 (Exhibit 15). A review of the "pencil copy" shows that the CM made adjustments to the Fixtures, GRD's, Water Heaters, Pumps – Heating/Cooling, Ductwork and Insulation line items. The review also shows that the CM added costs for the Alternate #2 – Storage Area line item. On or about that same day, McDaniel made the adjustments noted by the CM[7], certified the application and returned it to the CM (Exhibit 16). Upon receipt of the certified copy from McDaniel, the CM made further adjustments to the Ductwork and Insulation line items. In addition, the CM and the Architect discussed through email withholding an additional five percent from McDaniel's payment application (Exhibit 100). As referenced in a letter to McDaniel dated May 3, 2004, the CM did reduce the payment application, as discussed with the Architect, by five percent for defective work not remedied (Exhibit 17). Following all these reductions, the CM certified the application and forwarded it to the Architect. The Architect certified the application and forwarded it to IRSD for payment.

McDaniel submitted the "pencil copy" for Application and Certificate for Payment No. 20 on May 26, 2004 (Exhibit 18). A review of the "pencil copy" shows that the CM made adjustments to the Fuel Oil Piping, Fixtures, GRD's, Water Storage Tank, Ductwork and A/G Gas & Fuel Oil line items. On or about June 8, 2004, McDaniel made the adjustments noted by the CM, certified the application and returned it to the CM (Exhibit 19). Upon receipt of the certified copy from McDaniel, the CM certified the

[7] Apparently, McDaniel and the CM had further discussions regarding the Fixtures line item as the certified copy from McDaniel did not make the adjustment indicated on the marked up "pencil copy."

application and forwarded it to the Architect. The Architect certified the application and forwarded it to IRSD for payment.

Finally, McDaniel submitted the "pencil copy" for Application and Certificate for Payment No. 21 on June 25, 2004 (Exhibit 20). A review of the "pencil copy" shows that the CM made adjustments to the Chilled Water Piping, HVAC Equipment and Spiral Duct line items. On or about that same day, McDaniel made the adjustments noted by the CM, certified the application and returned it to the CM (Exhibit 21). Upon receipt of the certified copy from McDaniel, the CM made further adjustments to the Ductwork and Insulation line items. Following the additional reductions, the CM certified the application and forwarded it to the Architect. The Architect certified the application and forwarded it to IRSD for payment.

Contrary to the statements made by CSF regarding the payment application process, in our opinion, both the CM and Architect properly exercised their discretion and judgment regarding the certification of payment applications. The Certificate for Payment signed by the CM and Architect with each Application and Certificate for Payment states:

> In accordance with the Contract Documents, based on on-site observations and the data comprising this application, the Construction Manager and Architect certify to the Owner that to the best of their knowledge, information and belief the Work has progressed as indicated, the quality of the Work is in accordance with the Contract Documents, and the Contractor is entitled to payment of the AMOUNT CERTIFIED.

Following a review of McDaniel's "pencil copy" payment application and periodic downward adjustments made based upon the best of their knowledge, information and belief that the work had progressed as indicated, both the CM and the Architect signed the certificate for payment and forwarded it to IRSD for payment, as required by the Contract. There is no evidence to support CSF's contention that at the time the CM and

the Architect reviewed the Project for certification of payment applications that the amounts certified were incorrect.

B. Application and Certificate for Payment Nos. 22, 23R and 24

Section VI.E of this report provides a detailed analysis of Application and Certificate for Payment Nos. 22, 23R and 24. Unlike the prior twenty-one payment applications processed by McDaniel, the CM, the Architect and IRSD, each of the above listed payment applications was processed for a specific purpose, not directly related to the installation of work in the field. CSF has made much about the fact that many line items on the payment continuation sheets were listed at 100% complete following Application and Certificate for Payment No. 24, when in fact the work associated with those line items was less than 100%. In order to make payments to McDaniel subcontractors, material suppliers and equipment suppliers for work that had already been performed (but was unpaid by McDaniel) or for advance payment of equipment required so that the school could open, the CM, Architect and IRSD had only one option: to generate payments from the McDaniel Contract.

In our opinion, from Application and Certificate for Payment No. 22 forward, the payment applications only reflect payments for McDaniel subcontractors, material suppliers, equipment suppliers and in one instance, for an advance of payroll funds to McDaniel and were not based on an evaluation of the percentage complete of work in the field. The calculation of the percentage complete of individual line items on the continuation sheets is an accounting computation necessary to generate the payment. In that CSF was involved in the Project when these applications were being prepared, they should be well aware of the genesis of Application and Certificate for Payment Nos. 22, 23R and 24. Their contention that the percentages reflected in the continuation

sheets following those payment applications represent anything more than an internal accounting computation required to generate payments is surprising and incorrect.

Also, RLI was aware of the joint check payments and the McDaniel payroll payment made in Application and Certificate for Payment Nos. 23R and 24. RLI authorized the joint check payments, through their counsel, on August 17, 2004 and therefore should have also known that the changes to the continuation sheets line items made in Application and Certificate for Payment Nos. 23R and 24 were for bonded obligations from unpaid subcontractors, material suppliers and equipment suppliers.

C. McDaniel Administration of the Contract

Section VI.E of this report provides a detailed discussion of McDaniel's failure to abide by the terms of their Contract regarding payment to subcontractors, material suppliers and equipment suppliers. The General Conditions of the Contract for Construction (Exhibit 14), Article 9.3.3 states:

> … The Contractor further warrants that upon submittal of an Application for Payment all Work for which Certificates of Payment have been previously issued and payments received from the Owner shall, to the best of the Contractor's knowledge, information and belief, be free and clear of liens, claims, security interests or encumbrances in favor of the Contractor, Subcontractors, material suppliers, or other persons or entities making a claim by reason of having provided labor, materials and equipment relating to the Work.

In addition, each application for payment contained the following statement that was signed by a responsible individual at McDaniel and notarized (Exhibit 21):

> The undersigned Contractor certifies that to the best of the Contractor's knowledge, information and belief the Work covered by this Application for Payment has been completed in accordance with the Contract Documents, that all amounts have been paid by the Contractor for Work for which previous Certificates for Payment were issued and payments received from the Owner, and that current payment shown herein is due.

Mr. McDaniel stated in his deposition that there was no effort on the part of McDaniel to pay subcontractors and suppliers on the Project with funds received from IRSD[8].

> Q: On the Sussex Central project, did you use the funds that you received from the owner on that project to pay the costs for your suppliers and subcontractors for that project?
> MS. HALATYN: Objection. You could answer.
> A: In the transcript I stated last time the funds were commingled.
> Q: Tell me what you mean by that.
> A: We got the payments from the jobs and we pay the bills and hopefully a profit is made and there is some money left over.
> Q: So what you're saying is, there was no effort on the part of your company to see to it that the funds that were received for the Sussex Central project went to pay the Sussex Central costs?
> A: No.

In addition, Mr. McDaniel stated during his deposition[9] that on August 10, 2004 the collections from IRSD were greater than the direct job costs.

> Q: Sure. Do you recall that at the beginning of August 2004 the amount you had received from the owner on Sussex Central exceeded your direct cost on Sussex Central?
> A: Yes

The August 10, 2004 Job Cost Summary shows that the direct job costs were $3,387,354.27 and handwritten notes indicate that $3,743,239.00 had been collected from IRSD to date (Exhibit 22). A memorandum dated October 25, 2004 (Exhibit 98), from Patrick Miller, IRSD Director of Business, confirms the amount paid to McDaniel through August 10, 2004. McDaniel had collected approximately $355,885.00 more than the direct job costs and subcontractors, material suppliers and equipment suppliers were still not paid. McDaniel's invoice aging report dated August 9, 2004 (Exhibit 101) shows that $587,636.31 was unpaid but included in job cost to date. This unpaid amount included $306,377.32 that was more than ninety days old. Therefore, on August 10, 2004, $943,521.31 should have been available for McDaniel to pay their subcontractors and suppliers on the Project. Mr. McDaniel confirmed in his deposition

[8] See McDaniel deposition, page 268, line 22 to page 269, line 15.
[9] See McDaniel deposition, page 287, lines 13 -17.

that the accounts payable listed in the August 9, 2004 invoice aging report were included in the August 10, 2004 job cost summary[10].

Notwithstanding the fact that on August 10, 2004, McDaniel should have had $943,521.31 available to pay their subcontractors and suppliers, in a letter dated August 27, 2004, McDaniel requested financial assistance from RLI to complete the Project[11] (Exhibit 102). According to the Payout Request Summary prepared by CSF, it was not until October 1, 2004 that RLI first provided financial assistance to McDaniel (Exhibit 103). Following IRSD's termination of McDaniel on October 11, 2004, McDaniel reiterated in a letter to RLI on October 14, 2004 (Exhibit 104) their previous request for financial assistance by stating:

> We have warned RLI for several weeks that McDaniel required the bonding company's support to fund payroll.

Several weeks prior to McDaniel's termination, on September 20, 2004, RLI had noted in their Contract Surety Claim Review the following (Exhibit 105):

> Quite simply, in hindsight, our contractor did not have the experience to properly evaluate, bid, and manage projects of this size, much less two at one time. While the work product is satisfactory, cost over-runs have erased any profit and the contractor's cash flow has become insufficient to pay all subs and suppliers. (emphasis added)

In our opinion, this failure of McDaniel to pay subcontractors, material suppliers and for equipment on the Project from the funds previously received from IRSD, was a clear violation of the Contract and ultimately led to the need to issue payments to the subcontractors and suppliers by Application and Certificate for Payment Nos. 22, 23R and 24.

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[10] See McDaniel deposition, page 286, lines 11 – 21, Q: Would all of these accounts payable be included in the job cost summary since the job cost summary is dated a day after the accounts payable invoice aging report? A: I didn't understand. Q: These documents are only one day apart? A: Okay. Q: If something was on your accounts payable invoice aging report, would it also show up as a job cost in your job cost summary report? A: It would.

[11] This letter also requested financial assistance on the Caesar Rodney project.

D. Owner Default

In our opinion, there was no Owner default as defined in Section 12.4 of the Performance Bond or Section 15.3 of the Payment Bond. Sections 12.4 of the Performance Bond and 15.3 of the Payment Bond (Exhibit 23) both state:

> Owner Default: Failure of the Owner, which has neither been remedied nor waived, to pay the Contractor as required by the Construction Contract or to perform and complete or comply with the other terms thereof.

As stated elsewhere in this report, the Contract required that IRSD make payment on payment applications certified by the CM and Architect. We have shown previously that the CM and Architect performed their obligations under the Contract in certifying the payments and IRSD performed their obligations under the Contract by making the payments.

RLI's bonded principal, McDaniel Plumbing & Heating, is the party that breached their obligations under the Contract, not the Owner. McDaniel had an obligation to pay subcontractors and vendors from the funds received from IRSD and they failed to do so. The consequence of that breach was RLI's authorization to the CM to issue joint checks from the McDaniel Contract. That action ultimately caused the percentages on the continuation sheets to become an internal accounting computation.

E. IRSD Claims

We have reviewed, generally, the claims filed by IRSD and find them to be properly supported by daily reports, work tickets and invoices. The costs claimed by IRSD for Project completion as a result of the termination of McDaniel on October 11, 2004 are as follows (Exhibit 24):

Costs Paid to Date	
Joseph M. Zimmer, Inc.	$957,697.00
Tri-State Technologies, Inc.	$635,538.00
Misc. Backcharges/Completion Costs	$138,752.00
Professional Fees	$ 81,361.00
Damages	$ 53,182.00
Subtotal	$1,866,530.00
Less Contract Balance	($308,608.00)
Total Paid to Date	**$1,557,922.00**

Additional Costs	
ATC & Balancing (estimate)	$220,000.00
EDiS Extended Labor	$164,942.00
EDiS Extended General Conditions	$138,534.00
Becker Morgan (estimate)	$ 34,567.00
Total Additional Costs	**$558,043.00**

The total IRSD claim for costs paid to date and additional costs, not yet paid, is $2,115,965.00. In addition, IRSD has requested interest and litigation costs.

F. Summary

In our opinion, the CM and the Architect properly exercised their discretion and judgment regarding their review and certification of payment applications on the Project. Application and Certificate for Payment Nos. 22, 23R and 24 were processed to generate payment for unpaid subcontractors and suppliers, for advanced payment to equipment vendors and for advanced payment of McDaniel payroll and the calculation of percentages on the payment application continuation sheets was an internal

accounting function required to generate payments. Each of the payments made on Application and Certificate for Payment Nos. 22, 23R and 24 was either a bonded obligation of RLI or payment for labor or equipment for the Project.

McDaniel breached their Contract with IRSD when they failed to pay subcontractors, material suppliers and equipment suppliers following payment by IRSD. The Owner did not default as proffered by CSF, but performed in accordance with the Contract, which required it to make payment for certified payment applications.

Based on the above, in our opinion, IRSD is entitled to the costs incurred as a result of RLI's failure to perform in accordance with their bonds. The amount of IRSD's claims is $2,115,965.00, exclusive of interest and litigation costs.

V. Review of PCM Report

A. Overview

PCM's report presents information that was never asserted by McDaniel during the course of the Project and as far as we can ascertain is not at issue in the pending matter between RLI and IRSD. The filing of the PCM report as a part of the pending matter is apparently an attempt to support a contention that McDaniel's termination was in some manner unjustified. The PCM report goes to great lengths to analyze and calculate impact to the Project completion date, while McDaniel was terminated for poor workmanship and failure to provide adequate manpower rather than for delaying the end date of the Project.

FTI/BKS was greatly handicapped in our review of the PCM report because of the lack of any exhibits to support the dates and events that were noted throughout

PCM's narrative. We believe that we were able to locate most of the documents that PCM refers to although there are several that have not yet been found. This section of the FTI/BKS report will focus on several of the concerns that we have with the information and opinions presented by PCM in their report.

The second paragraph of PCM's July 30, 2007 report sets the tone for the entire eighty-three page narrative.

> Albeit the fact that the EDiS contract envisioned performance of pre construction services, the specific period for the construction, as referenced in their contract, was from a commencement on July 15th, 2002 to a substantial completion on May 21st, 2004, and a final on September 2nd, 2004, or a gross duration of twenty six and a half months overall construction.

As noted above, there are no exhibits to support the dates provided by PCM, but a review of the CM's Contract (Exhibit 94) indicates that PCM misstates two of the three dates listed in the paragraph. More importantly, the milestone dates pursuant to McDaniel's Contract are found in the pre-bid construction schedule incorporated in Specification Section 01305 – Construction Schedule (Exhibit 2). The pre-bid construction schedule shows that the milestone date for Start Construction Bid Pack "A" is July 30, 2002, not July 15, 2002 as noted by PCM; that the milestone date for Substantial Completion is May 31, 2004, not May 21, 2004 as noted by PCM; and that the milestone date for Project Complete is August 2, 2004, not September 2, 2004 as noted by PCM. Therefore, the gross duration of the Project was originally contemplated to be 735 calendar days or approximately twenty-four months, not twenty-six and one half months as noted by PCM. Errors of the type that exist within this second paragraph permeate the entire PCM report and as noted above, without the inclusion of supporting documentation has made our review extremely difficult[12].

[12] Additional examples of errors are: See page eleven of the report wherein PCM indicates that the January 10, 2003 progress meeting minutes report that the submission of steel drawings for areas C and E were complete on that date. The progress meeting was actually held on January 7, 2003 and the minutes actually indicate that the submission of steel drawings is for areas C, D and E. See page thirty-

B. Baseline Schedule

On page three of PCM's report they state that:

> As part of the contract documents the owner supplied bidders with the planned performance schedule, with performance dates, presented in a critical path method format, representing a July 17th, 2002 commencement and an anticipated completion date of May 31st, 2004.
>
> It is important to note that this report relies upon the schedule incorporated in the contract documents, and though we reflect upon dates and sequences afforded in numerous subsequent schedule updates we believe that McDaniel has the right to expect and rely upon the performance, sequencing and durations incorporated in the aforementioned schedule.

Our review of the Contract documents indicates that PCM has relied upon and based their analysis on an incorrect baseline schedule. The pre-bid construction schedule, as incorporated in Specification Section 01305 – Construction Schedule, includes only seventeen construction activities, significantly fewer activities than necessary to depict the work on a project the scale of Sussex Central High School. In addition, most of the seventeen construction activities are open-ended, that is, they are not connected to other activities within the schedule network. The logic relationships between activities in a true CPM schedule network are what distinguish CPM schedules from simple bar charts. Finally, and most importantly, the Contract did not contemplate that the pre-bid construction schedule would be the schedule that Contractors would rely upon for determining performance, sequencing and durations as stated by PCM.

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five of the report wherein PCM indicates that the August 19, 2003 Construction Progress Meeting Minutes No. 24 reports that the mason is mostly complete on the 2nd floor of A Wing. The report actually states that the mason is mostly complete on the 2nd floor of A Wing, although work is still required at the mechanical chases which cannot be performed until McDaniel completes their rough-in. See page forty-nine of the report wherein PCM indicates that the January 6, 2004 Construction Progress Meeting Minutes No. 34 reports that the roofer needs to install cap flashing on C, D and E Wings as soon as possible to prevent rain from entering the building. The report actually states that the roofer needs to install cap flashing on C, D and E Wings as soon as possible to prevent wind blown rain from entering the building. (emphasis added)

Specification Section 01305.1.1.1 (Exhibit 2) states:

> Time is the critical element of this Project. By entering a bid, the Contractor agrees to adhere to the intermediate Milestone Dates and Dates of Substantial and Final Completion established herein. The Contractor also understands that all work must be performed in an orderly and closely coordinated sequence in order to achieve the specified Milestones and Completion Dates, and the Contractor hereby agrees to perform his work in conformance with the Pre-Bid Construction Schedule established herein, or with the then current and approved Project Construction Schedule. (emphasis added)

Specification Section 01305.2.2.1 states:

> After award of Contract, or issuance of a Notice to Proceed, the Contractor will meet with the Construction Manager to review the Pre-Bid Construction Schedule, and the overall project plan for construction. Following the above review the contractor will meet with each subcontractor and supplier to view the detailed plans for performing his work. Following these meetings and within fourteen (14) days after award of the Contract or issuance of a Notice to Proceed, the Contractor shall prepare and submit for the Construction Manager's approval a Work Schedule, providing for the expeditious, timely and practical execution of the Work. The Contractor's Work Schedule shall include activity descriptions and durations for shop drawings, fabrication, delivery and installation. If the Construction Manager so requests, the Contractor shall provide adequate explanation regarding crew sizes, production rates and similar data used to arrive at the durations and sequences.

And Specification Section 01305.2.2.2 (Exhibit 2) states:

> The Construction Manager shall review the Contractor's Work Schedule, coordinate it with the separate work by other contractors, the Owner and the Construction Manager, and after coordination, shall incorporate it into the approved Project Construction Schedule. The approved Project Construction Schedule shall be issued to the Contractor and the Contractor shall perform his Work in conformity therewith. (emphasis added)

A review of the above listed excerpts from Specification Section 01305 – Construction Schedule, clearly indicates that the Contractor should have known that the pre-bid construction schedule was included in the Contract documents as a reference to the milestone dates as noted in Specification Section 01305.1.1.1. Specification Section 01305.2.2.2 should have alerted the Contractor to anticipate the issuance of a more

detailed construction schedule from the CM based upon each contractor's input following notice to proceed.

Information presented at the pre-construction conference held on October 1, 2002 (Exhibit 25) reiterated the need for the contractors to prepare and submit a work schedule to assist in the preparation of the CM's construction schedule[13]. On November 18, 2002[14], the CM issued a more detailed updated construction schedule to all contractors (Exhibit 13). While several earlier iterations of the November 18, 2002 schedule had been discussed during Progress Meetings, it was the CM's intent that this schedule was being issued in accordance with the Project Specifications. The diagram below highlights the difference between several activities shown on the pre-bid construction schedule and the November 18, 2002 Project Construction Schedule. The information shown on Diagram B shows that the overall start and finish dates for the activities were different in the two schedules and that the November 18, 2002 Project Construction Schedule provided more detail by breaking out the single bar activities in the pre-bid construction schedule into individual activities for each separate wing of the building. The breakdown of the activities into the separate wings of the building provided the contractors with a better understanding of the planned flow of the work. For example, the pre-bid construction schedule indicated that the roofing scope of work would not begin until the erection of structural steel and metal decking was complete for

[13] Item #17 Construction Schedule – Specification Section 01305 a and b states "All Contractors will prepare and submit for review a work schedule within 14 days of the LOI. The schedules will be submitted NLT 8 Oct 02. This schedule shall indicate the proposed methods of conducting the work required under the contract. The schedule shall include, in addition to construction activities, the submittal and approval of samples of materials and shop drawings; procurement of critical materials and equipment; and fabrication, installation, and testing of special materials and equipment."

[14] In his cover memo, Christian McCone noted "Attached is a copy of the current Project Construction Schedule for Sussex Central High School. Please review the schedule and ensure that your work will be performed in the sequence and time frame stated. In accordance with Section 01305 – Construction Schedule, paragraph 2.3, any proposed schedule revisions should be submitted in writing to the Construction Manager. Written approval is required before deviating from the schedule.

the entire Project whereas the November 18, 2002 Project construction schedule contemplated roofing for each individual wing following closely the erection of structural steel and metal decking of that particular wing. The more detailed schedule would also have provided additional information regarding the Project's critical path to the scheduler.

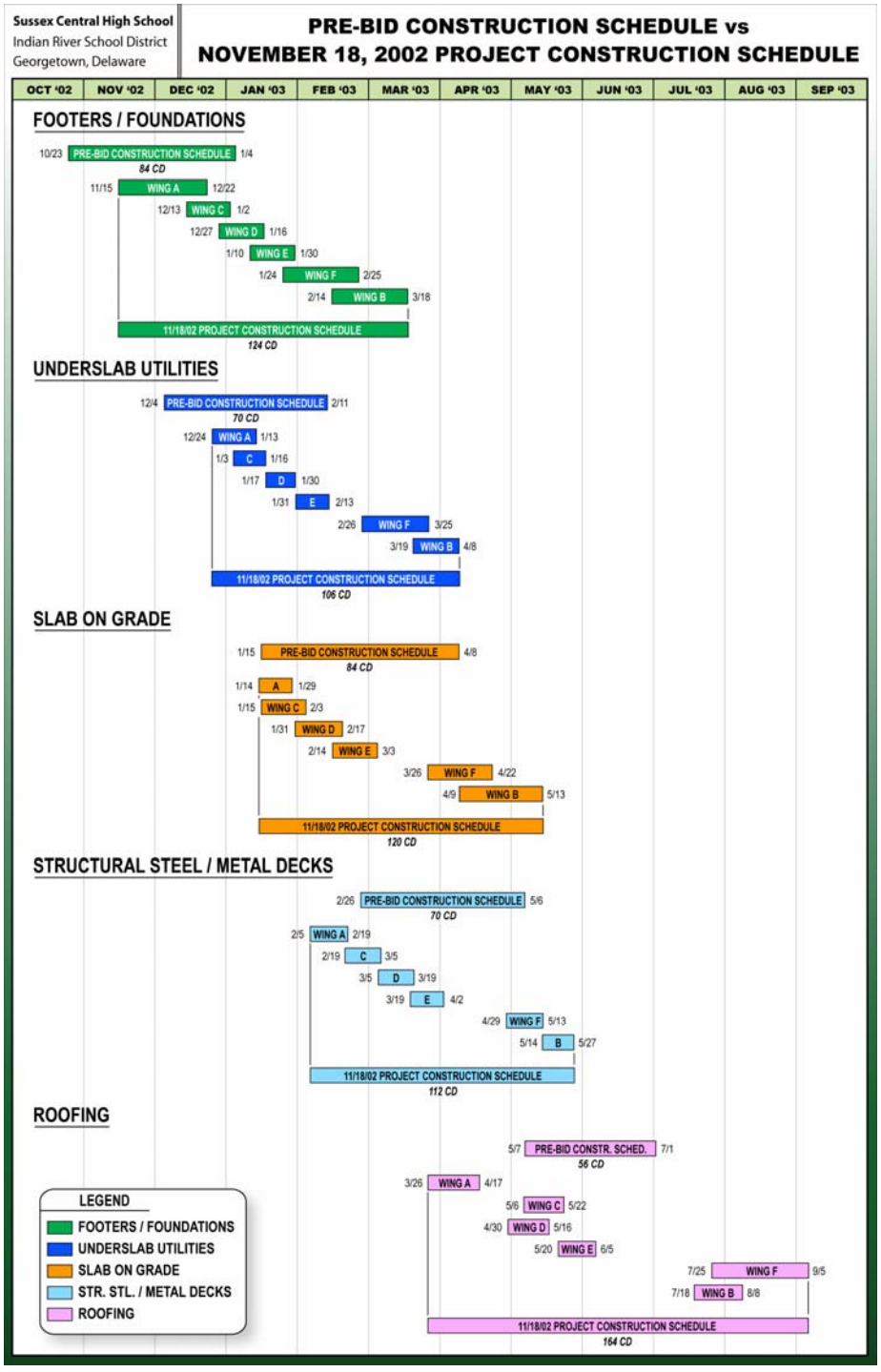

Diagram B – Pre-Bid Construction Schedule vs November 18, 2002 Project Construction Schedule

Finally, a review of PCM's "recapitulation" of the pre-bid construction schedule found on page five of their report shows that PCM has not made an accurate re-creation of that pre-bid construction schedule. For example, the logic restraints from underslab utilities to slab on grade is shown as start-to-start in the pre-bid construction schedule and as finish-to-finish in the PCM "recapitulation." PCM has added finish-to-start restraints from the completion of slab on grade to the start of masonry walls above grade and carpentry and general work that were non-existent in the pre-bid construction schedule. PCM has changed the starting relationship to erect structural steel and metal decking to a finish-to-start relationship from footers and foundation walls rather than maintaining the start-to-start relationship from slab on grade as portrayed in the pre-bid construction schedule. Finally, the pre-bid construction schedule contained no logic relationships to or from the finishes. PCM has incorporated a finish-to-start relationship from roofing to the finishes. As noted throughout their narrative they have also included a twenty-nine calendar day lag or gap between the completion of roofing to the start of finishes. The unexplained twenty-nine calendar day lag does not make scheduling sense. In our opinion, the more likely relationships would be from roofing to metal studs and drywall and then to the finishes, thereby eliminating the twenty-nine calendar day lag incorporated by PCM.

In our opinion, PCM's selection of the pre-bid construction schedule as the baseline for their analysis and their further manipulation of the logic to create their CPM baseline schedule shown on page five of their report is a fatal flaw that impacts on all of their conclusions and impact calculations. One of the concerns that FTI/BKS had with reviewing the Project schedules was the lack of electronic scheduling data. The CM was requested to provide all electronic scheduling data associated with the Project but was unable to locate the electronic data for the first year of the Project. The electronic scheduling data affords the scheduling consultant the opportunity to review logic restraints as input by the Project scheduler and more importantly, to determine the

Project critical path and the float value on non-critical activities. Likewise, PCM has not provided the electronic data files of the schedules contained in their report, therefore, FTI/BKS is also unable to review the underlying logic, critical path or float values of their schedules.

C. Schedule Revisions/Updates

A point that PCM attempts to make throughout their narrative is stated initially in the last paragraph on page five wherein they state:

> As noted in this narrative though delays amounted to substantive proportion in comparison to the project original performance duration, yet at no time was an extension afforded, by change, to the contract. Monthly schedule revisions/updates will be issued that compress sequences resulting in the aforementioned acceleration/compression, in an attempt to mitigate the impact of delays, but largely to no avail. Simultaneously EDiS continues to reassure the district of a timely or near timely completion despite what we will demonstrate were literally months of critical impact to the baseline schedule.

PCM states that "… at no time was an extension afforded, by change, to the contract." While they are correct that no time extension was given by change order, the schedules did reflect an additional two months for substantial completion in the summer of 2003. The schedule logic was modified to provide the contractors with additional construction time during the two month duration between the Substantial Completion Milestone date of May 31, 2004 to the Project Completion Milestone date of August 2, 2004. The August 22, 2003 schedule attached to the August 19, 2003 Construction Progress Meeting Minutes No. 24 reflects the change in logic and the Substantial Completion milestone date of August 2, 2004 (Exhibit 26).

On June 25, 2004, the CM distributed a June 21, 2004 construction progress schedule (Exhibit 106) indicating that the substantial completion for the B Wing should occur as follows:

Art/Music/JROTC	September 1, 2004
VO/AG and Shops	September 16, 2004
Theater	October 15, 2004

The cover letter from the CM stated that the schedule reflected an extension of time for the work in B Wing. In addition, the contractors were effectively provided a further time extension for B Wing with the issuance of the August 17, 2004 Construction Progress Meeting Minutes No. 53 (Exhibit 27) which stated:

> EDIS distributed an updated Master Schedule. Each contractor was told to review this schedule and ensure that their work is completed on time.

A review of the August 16, 2004 updated construction progress schedule attached to the August 17, 2004 meeting minutes reveals that the substantial completion dates for the B Wing are:

Art/Music/JROTC	October 14, 2004
VO/AG and Shops	November 12, 2004
Theater	November 16, 2004

The contractors were given additional time to complete their work in B Wing pursuant to the June 21, 2004 and the August 16, 2004 updated construction progress schedules issued by the CM.

PCM continues by stating that "Monthly schedule revisions/updates will be issued that compress sequences resulting in the aforementioned acceleration/compression, in an attempt to mitigate the impact of delays, but largely to no avail." It is extremely important to keep in mind that, with the exception of B Wing, the school opened on September 7, 2004, as originally scheduled. For PCM to state that monthly schedule revisions/updates were to no avail is somewhat disingenuous given the fact that the

school opened as originally scheduled. McDaniel was included in the schedule revision/updating process throughout the entire construction period. Scheduling was reviewed at each Construction Progress Meeting held every two weeks and revised CPM schedules or two week look-ahead schedules were discussed and revised by the contractors in attendance. For example, at the Construction Progress Meeting held on October 29, 2002 the minutes reflect that the current schedule was reviewed and that adjustments were made to the schedule during the meeting[15] (Exhibit 28). The minutes also included a note that occurred on most of the Construction Progress Meeting Minutes, "All contractors are asked to review the schedule and identify any revisions to EDIS." McDaniel was instructed to review the schedule discussed at each Construction Progress Meeting and to identify any revisions that they had to the schedule. To our knowledge, McDaniel never once provided feedback to the CM regarding issues that they might have had with the scheduling process.

Finally, PCM notes that they will demonstrate literally months of critical impact to the baseline schedule. As indicated above, we believe that the baseline schedule utilized by PCM is incorrect and therefore the information derived from that analysis is also incorrect. Notwithstanding the months of alleged critical impact, with the exception of B Wing, the school opened as originally scheduled.

PCM states at the bottom of page seven:

> One of the initial areas that EDiS explores, in what appears to be an attempt to ameliorate early schedule logic delays, from erosion control and foundation performance, is MEP scheduling the performance of underground near fully concurrent with foundations, slabs on grade and structural steel rather than in a sequential logic, with overlaps, as originally intended.

[15] Construction Progress Meeting Minutes No. 5 dated October 29, 2002, item 5.5.5, "EDIS reviewed the current schedule dated 17 October 2002. During the meeting, adjustments were made to the schedule. After the meeting, EDIS added activities for windows, roofing, mechanical, electrical and fire sprinkler. All contractors are asked to review the schedule and identify any revisions to EDIS. The revised scheduled [sic] dated 31 October 2002, is attached."

Diagram C shows the differences between the four activities discussed by PCM in the paragraph above. Ignoring the fact that PCM is utilizing the pre-bid construction schedule for comparison, it is clear that the durations for the individual activities have been increased in the September 18, 2002 schedule[16] and that the overall duration from the start of footers and foundation walls to the completion of erect structural steel and metal decking is an identical 196 calendar days. The sequencing is identical although the overlap of activities is somewhat greater. It is important to remember that, in a sense, there are six separate buildings being constructed on this Project. It is entirely appropriate that immediately following the footers, foundation walls activity in an area, the underslab utilities would begin in that area and that immediately following the underslab utilities that the slab on grade would begin in that area and that immediately following the slab on grade that the erection of structural steel would begin. We would expect to see that sequence within each wing of the building with the only restriction being the safety factor associated with swinging structural steel over areas where ground work is being performed. The CPM scheduler should have taken that into account in preparing the schedules.

PCM is critical of the revisions included in the September 18, 2002 progress schedule although as can be seen by Diagram C, the net impact is a late start of nine calendar days to footings and foundations and a late finish of nine calendar days to the erection of structural steel.

[16] Note that PCM refers to the schedule as the September 17, 2002 schedule. We believe that the schedule referenced by PCM is actually dated September 18, 2002 and is attached to the September 17, 2002 Construction Progress Meeting Minutes No. 2. Item 2.2.5 of the meeting minutes states “EDIS reviewed the current schedule dated 10 Sep ’02. During the meeting, adjustments were made to the schedule. The revised scheduled [sic] dated 18 Sep ’02 is attached. It was discussed and agreed that the duration of activity for footers and piers for Area A would be increased to three weeks.” (Exhibit 29)

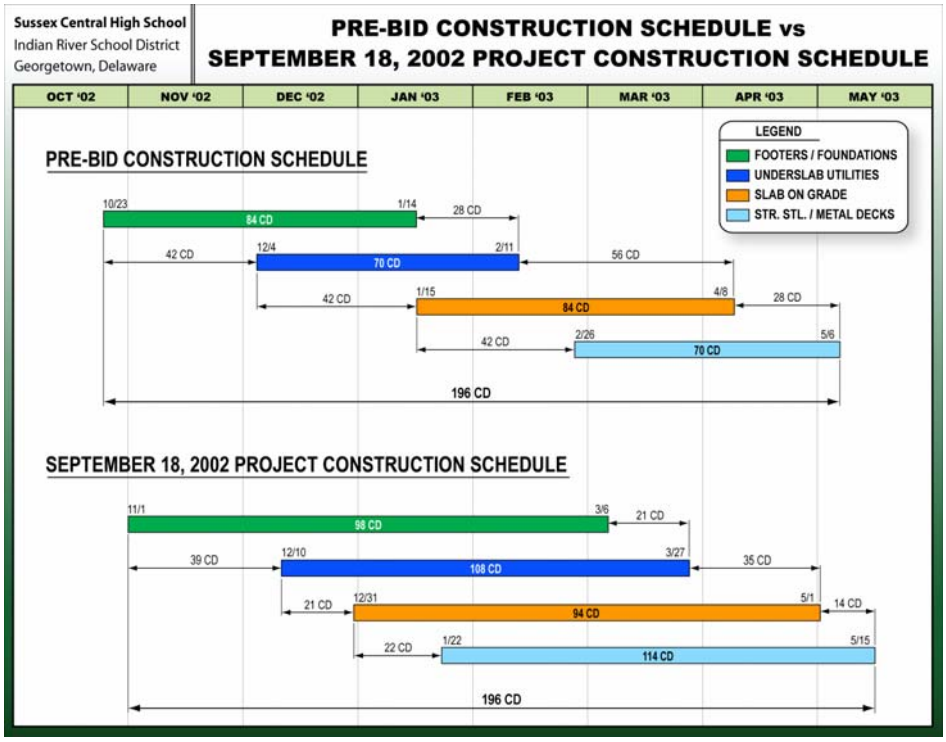

Diagram C – Pre-Bid Construction Schedule vs. September 18, 2002 Schedule

PCM is critical of the scheduling efforts by the CM throughout their narrative. There are several Contract provisions that address the scheduling process and what the contractors should have expected. The General Conditions of the Contract for Construction address the scheduling in Article 3.10.4 wherein it states (Exhibit 14):

> The Contractor shall conform to the most recent schedules.

And Specification Section 01305.2.2.4 states (Exhibit 2):

> The Construction Manager will incorporate approved schedule revisions into the Project Construction Schedule, and shall otherwise update and revise the Project Construction Schedule as the Construction Manager, at his sole discretion, deems necessary. (emphasis added)

The Contract clearly contemplated that the schedule would be updated and revised by the CM. In fact, as noted above, the contractors were invited to be active participants in

the scheduling process through their involvement in the Construction Progress Meetings held every two weeks.

PCM is again critical of the CM's scheduling efforts on page ten of their narrative wherein they state:

> This failure to compute and outline impacts and corresponding critical extension, arises partly from to the fact that the building pad has not completed as of November 26th, yet the EDiS scheduling document [December 2, 2002] reflects the activity complete on October 31st, 2002. Clearly, had the schedule been properly updated, and statused with the proper progress the impact would have been generated. [sic]

The schedule referenced by PCM is incorporated within the November 26, 2002 Construction Progress Meeting Minutes and is dated December 2, 2002 (Exhibit 30). PCM is incorrect in its assessment of the December 2, 2002 schedule update for several reasons. First, the schedule does not show the building pad activity complete as of October 31, 2002 as noted by PCM. The progress bar is in the position of September 26, 2002 to October 30, 2002 although there is clearly no actual finish recorded for the activity nor is there a progress bar through the activity as there is for the strip topsoil activity located directly above the building pad activity. Second, as stated earlier, without the electronic schedule data it is extremely difficult to determine the precise critical path of the Project. We are able to determine that the activity scheduled to immediately succeed the building pads is the layout foundations in Wing A and that the layout foundations A Wing activity is shown to have been started on November 15, 2002 and completed on November 22, 2002. We are also able to determine that the footers and piers A Wing activity that is scheduled to immediately succeed the foundations layout A Wing is shown to have started on November 21, 2002. In our opinion, it is very likely that the critical path shifts from the building pads activity at a point that the succeeding activity can begin, in this case the foundation layout A Wing on November 15, 2002. In other words, it is entirely possible that the completion of the building pads is not on the Project's critical path and therefore any delay would not have impacted the

critical path. The December 2, 2002 progress schedule contemplates a May 28, 2004 substantial completion, three calendar days earlier than the milestone date indicated in the pre-bid construction schedule.

Again, as is the case with most of the Construction Progress Meeting Minutes, the November 26, 2002 minutes requested that the contractors review the schedule and identify any revisions to EDIS[17].

D. Structural Steel Shop Drawings and Fabrication

On page eleven, PCM states that:

> The submission of steel drawings for Areas C and E, were completed as of the January 10th, 2003 project meeting. Given the outstanding steel shop drawing submissions (Areas F and B) these critical drawings need to be approved in a manner as not to further waylay the contract critical path through the critical steel fabrication and erection sequence.

In our opinion, without CPM schedule updates that show the float values of activities and the Project's current critical path it is not possible to determine whether the structural steel shop drawing submittal, approval, fabrication and delivery process is impacting the Project to a greater extent than the foundations. The foundations are clearly being impacted by weather during this time frame. PCM has again assumed that the completion of an entire activity, in this case the structural steel shop drawings, is required prior to the beginning of the succeeding activity, structural steel fabrication. The structural steel frame for the Project was fabricated, delivered and erected by wing; therefore the fabrication of the A Wing structural steel could begin as soon as the A Wing shop drawings were approved on December 31, 2002. We found nothing in the

[17] Construction Progress Meeting Minutes No. 7 dated November 26, 2002, item 7.2.5, "EDIS reviewed the current schedule dated 19 November 2002. All contractors are asked to review the schedule and identify any revisions to EDIS. EDIS added an activity for rain delays. The revised schedule dated 2 December 2002, is attached."

record to indicate that the erection of structural steel was ever impacted by the lack of fabricated structural steel available on-site.

On pages fifteen and sixteen, PCM continues to indicate that the structural steel shop drawings have impacted the Project by several months without determining whether the structural steel erection is on the current Project critical path.

> On January 24th, 2003 Baker Ingram & Associates transmits final Area E drawings as well as miscellaneous steel drawings for Area A. On the 27th and 29th of January structural steel drawings for Area D, and E are returned by EDiS to Murphy.
>
> The resultant impact of this issue is noted below using the original contract baseline logic and the assumption that steel will start in A on or about April 17th, 2003 (Steel fab per the January 24th, 2003 meeting minutes has not commenced (Baseline schedule allows for fabrication duration and lag of thirty three calendar days prior to commencement of Building A steel erection, that there will be no further impacts form concrete foundations and that the remaining design can be complete by January 31st, 2003 and fabrication by the 28th of April 2003. [sic]

The Construction Progress Meeting Minutes No. 11, dated January 21, 2003, indicates that the footers in Areas A and C are only 75% complete and that the pedestals in Areas A and C are only 80% complete (Exhibit 14). The minutes further state that the excavation and installation of footers will continue as weather permits and that the erection of steel should start by the beginning of March 2003, also depending on weather. The January 27, 2003 schedule, attached to the meeting minutes, clearly notes that the fabrication of structural steel will begin for each separate area of the Project upon approval of that area's shop drawings. The schedule also clearly indicates that the fabrication of structural steel in each area is scheduled well in advance of the structural steel erection in that area. Given the weather impacts to the foundation scope of work on the Project through January 2003, we do not believe that the structural steel shop drawings or fabrication would be driving the critical path of the Project and therefore impact the completion date of the Project as suggested by PCM.

With respect to scheduling, we also point out that the January 21, 2003 Construction Progress Meeting Minutes No. 11 state in Item 11.2.5 that:

> EDIS reviewed the current schedule dated 10 January 2003. All contractors are asked to review the schedule and identify any revisions to EDIS. The revised schedule dated 27 January 2003 is attached.

Again, McDaniel was included in the review of the project schedule and was asked to provide input on the January 27, 2003 schedule attached to the meeting minutes. When asked about many of the schedules issued to the contractors on the Project, Mr. McDaniel confirmed in his deposition testimony[18] that they had not responded with any concerns on any of the schedules presented (Exhibit 107).

E. Weather Impact

On page eighteen and several preceding pages, PCM discusses the weather and its impact on the foundations and underground work through February 2003. In the first paragraph PCM states:

> So that there is no confusion that failure to afford an accessible site and timely foundation installation is why the critical project pace is lagging and the February 14th 2003 McDaniel daily log clearly calls out the basis for impact to underground installation to date.

The McDaniel daily reports from January 22, 2003, January 27, 2003, February 4, 2003 and February 5, 2003 each discuss the impact of the winter weather on the work (Exhibit 32). The February 2003 Monthly Project Status Report issued by the CM to IRSD (Exhibit 33) reported that:

> Installation of the footings and piers has continued during the month of February, however, this work has been at about a 40% production rate due to the extremely poor weather conditions.
>
> Installation of the Force Main has continued during the bad weather and is now approximately 95% complete.

[18] See McDaniel deposition, page 272, line 19 through page 278, line 18.

> Installation of the entrance road section has begun, and should be completed by the second week of March, weather permitting.
>
> To date the weather has delayed the project by 9 weeks.

Clearly, as reported by McDaniel, the CM and PCM, weather impacted the ground activities during the early period of this Project. A review of the Contract documents provides some insight to the handling of weather impacts on this Project. Specification Section 01305.1.1.2 states in part (Exhibit 2):

> … The Contractor further acknowledges that work may be required to be performed during the winter season, that conditions during this season may be adverse and abnormal, but that such conditions will not be the basis for an extension of the Contract Time.

And Specification Section 01305.3.3.1 states:

> The Contractor shall start each part of this [his] work on the date designated for start in the approved Project Construction Schedule unless advised by the Construction Manager that the preceding activity is ahead or behind schedule. He shall carry the work forward expeditiously with adequate forces, equipment and materials, and shall complete each part of his work on or before the date designated in the approved Project Construction Schedule.

The Contract anticipated that weather may impact performance and that it would be necessary for the CM to constantly review the progress of the work, to notify contractors of changes to the schedule and to incorporate those changes into updated construction progress schedules. The current status of the work and those updated construction progress schedules were discussed with the contractors and revised at each Construction Progress Meeting.

On page nineteen, PCM states:

> From review it was be ill advised to base purported schedule impact on the monthly schedule updates referenced performance, but, instead, preferably on the project meeting minutes. [sic]

Our review of the Project documentation indicates that the CM also realized the impact of the weather on the early construction performance, and with the April 15, 2003 Construction Progress Meeting, began utilizing two-week look-ahead schedules to track the Project performance (Exhibit 34). The two-week schedules allowed the contractors to focus on their work for a more definitive period of time and in a more detailed manner. They also allowed the contractors to see more clearly the detailed work of other contractors during that same two-week period.

The weather impacts during Fall 2002 and Winter 2002/2003 were known by the CM and the contractors and were being discussed and worked around during the Construction Progress Meetings. Revisions were being made to the Project Construction Schedules, with input by the contractors, to overcome the weather impacts. The success of this joint scheduling process was realized in September 2004 when the school opened, with the exception of B Wing, as originally planned.

F. Delay Notifications

As noted by PCM on page twenty-four, on April 22, 2003 (Exhibit 35) McDaniel notified the CM that they had been "delayed by the lack of progress of the concrete contractor." This letter was the first of two that McDaniel would issue to the CM regarding delays. The second letter was issued several weeks later on May 8, 2003 (Exhibit 36). The May 8, 2003 correspondence was more detailed than the earlier April 22, 2003 letter and specifically requested a five month time extension. As with PCM, McDaniel utilized the pre-bid construction schedule (Exhibit 2) as a baseline in calculating their delays rather than the more detailed November 18, 2002 Project Construction Schedule (Exhibit 13). The May 8, 2003 correspondence stated that:

> Pursuant to paragraph 4.7 of the General Conditions, we write to formalize our claim with the School District for an extension of time (paragraph 4.7.8) and additional cost (paragraph 4.7.7) as a result of delays and inefficiencies at the Project.

In addition to the Contract clauses quoted in McDaniel's May 8, 2003 correspondence we reviewed the General Conditions of the Contract for Construction, Section 4.7.2 which states in part (Exhibit 14):

> Claims, including those alleging an error by the Construction Manager or Architect, shall be referred initially to the Architect for action as provided in Paragraph 4.8. (emphasis added)

And Section 4.7.3 which states in part:

> Claims by either party must be made within 21 days after occurrence of the event giving rise to such Claim or within 21 days after the claimant first recognizes the condition giving rise to the Claim, whichever is later. Claims must be made by written notice. (emphasis added)

And the Supplementary Conditions of the Contract for Construction, Section 8.3.2 states in part:

> … All claims for extension of time for delays, acceleration or hindrances shall be made, in writing, to the Architect and Owner no more than seven (7) calendar days after the occurrence of the delay, acceleration or hindrance. The written request for an extension of time shall be a condition precedent to the Contractor's right to claim an extension of time.

The Contract clauses identified above obligated McDaniel to do two things. The first was to notify the Architect in writing of the delay. The second was to provide the notification within twenty-one days as noted in Section 4.7.3 or within seven calendar days as noted in Section 8.3.2. McDaniel failed to fulfill both of these two Contract requirements. Both of McDaniel's letters were written to the CM and not the Architect as required by Sections 4.7.2 and 8.3.2. The May 8, 2003 letter describes delays that were known and discussed as early as the September 17, 2002 Construction Progress Meeting. The duration between the September 17, 2002 Construction Progress Meeting and McDaniel's May 8, 2003 delay notice letter was 232 calendar days which greatly exceeded the Contract required notice of not more than twenty-one days.

It is important to note that during the 232 calendar days, McDaniel was involved in discussions regarding changes and revisions to the Project Construction Schedules as reflected in numerous Construction Progress Meeting Minutes. The changes and revisions to the Project Construction Schedule were made to specifically overcome impacts such as those identified in McDaniel's May 8, 2003 correspondence. Also important to note was that McDaniel showed through their May 8, 2003 correspondence that they knew to provide written notices of delay, although they never did so again following that date.

G. Foundation Impacts

PCM discusses impacts to the Project resulting from the late foundation completions in A Wing and F Wing on page twenty-nine wherein they state:

> Yet as Area F underground is completing, on the 10th of June 2003 McDaniel cannot start Area B (Incomplete footer installation) or continue Area A (Steel work overhead). Given that all foundations were to have been completed in January 2003 the Area A delays and those in Area F have extended this critical work scope five months.

As noted earlier, without the electronic scheduling data it is very difficult to determine with precision which activities are on the Project's critical path, but experience indicates that it is very likely that the critical path shifted from the foundations on or about May 12, 2003 with the start of structural steel in A Wing. To the extent that any remaining foundation, underground utility and slab on grade work continued in other areas without causing the structural steel to have to wait for their completion would be an indication that the structural steel was now driving the critical path of the Project. PCM has apparently not made any attempt to review the critical path of the Project on June 10, 2003, but has simply compared the planned completion of foundations to the actual status of foundations on June 10, 2003 to determine the Project impact. If the completion of the F Wing foundations which PCM is calculating their impact through is

not on the Project's critical path, then the measure of impact is incorrect. Again, in order for an activity to impact the final completion of the Project, that activity must be on the critical path of the Project.

In our opinion, if foundations impacted the Project, that impact would have ceased on or about May 12, 2003 with the start of structural steel erection. PCM also points out in the page twenty-nine statement that McDaniel is unable to work in A Wing because of steel erection overhead. McDaniel's daily reports indicate that on the very next day, June 11, 2003, they are laying out A Wing underground and that several days later on June 13, 2003, they are stocking the roof drains on the A Wing roof. On June 16, 2003, McDaniel reports that they are installing roof drains and overflow drains in A Wing as well as installing hangers in the second floor ceiling of A Wing for RW (rain water) piping (Exhibit 37). We should point out that, in order to assist in advancing the Project, the CM changed the sequence of construction in A Wing. The erection of structural steel in A Wing preceded the completion of underground utilities and the placement of the slab on grade in the A Wing.

H. July 2003 Impact Schedule

On pages thirty-one through thirty-three, PCM provides an impact schedule that they allege is based on the "information in the July reporting." On page thirty-three, they state that:

> Clearly, from this analysis the project has slipped four and a half months from May 31st, 2004 to an impacted contract substantial completion of October 8th, 2004, and the roofing contract, which will yield further impacts, has yet to begin.

The four and one half month slip in substantial completion occurs in the PCM impact schedule because they have shifted the sixteen month mechanical and plumbing, fire protection and electrical activities out by approximately four and one half months. As we

noted earlier in our discussion regarding the baseline schedule chosen by PCM, the extreme simplicity of that schedule makes it ineffective as either a scheduling tool or an analytical tool. The sixteen month mechanical and plumbing activity is comprised of many individual activities in many different areas of the Project. Utilizing a schedule that contains sixteen month activities to determine Project impacts is simply incorrect. The slightest delays to an activity that contains durations of that magnitude will obviously create an impact to the Project end date. Many project scheduling specifications do not allow construction activities in a CPM schedule with durations greater than twenty work days for that very reason.

It is extremely likely that if the mechanical and plumbing, fire protection and electrical activities were broken down into reasonable activities that the Project critical path would include some amount of roofing, drywall and finishes. Currently as portrayed by PCM, the impact schedule contemplates that the finishes will be complete several weeks prior to the mechanical and plumbing, fire protection and electrical. In our opinion, that is a potential flaw in the schedule logic. It is also important to keep in mind that the school, with the exception of B Wing, opened on September 7, 2004, approximately one month earlier than the impact schedule presented by PCM.

I. Roofing Impacts

On page forty, PCM discusses the roofing and its impact on McDaniel's mechanical work:

> Though the roofer did mobilize the site, as of the 11th of September it does not appear any roofing has commenced and as noted above, from McDaniel's daily report as of September 27th, 2003, this is impacting penthouse construction as well as actively interfering with interior mechanical construction (protection of installations in place) throughout the project.
>
> Additionally the planned roofing duration of two months will be grossly exceeded over the next nine months, due to among other issues the

> impact of adverse cold weather, further exacerbating any chance of McDaniel working in a water-tight building, critical for commencing water sensitive interior ductwork, insulation and equipment hang.

As indicated, the roofer did mobilize to the site on or about September 11, 2003 and contrary to PCM's belief that roofing had not commenced by September 27, 2003, progress photographs taken on September 21, 2003 clearly show the roofing on C Wing in progress on that date (Exhibit 38). With respect to McDaniel's inability to commence water sensitive interior ductwork, their daily reports show that ductwork began in the A Wing on June 27, 2003, approximately two and one half months prior to the mobilization of the roofing contractor (Exhibit 39). The McDaniel daily reports also show that the ductwork for the C Wing was delivered on July 15, 2003 and duct installation began in C Wing the next day, July 16, 2003, approximately two months prior to the mobilization of the roofing contractor (Exhibit 40).

With respect to equipment, the York Air Handlers were delivered to the site on August 22, 2003 and were set in the A, C, D and E Wing penthouses on September 3, 2003. On September 5, 2003 McDaniel continued work on the air handlers in the penthouses (Exhibit 41). Each of these events occurred prior to the mobilization of the roofing contractor.

On August 27, 2003, the CM forwarded a letter to McDaniel stating that the Engineer had approved the installation of Armaflex insulation in lieu of fiberglass insulation (Exhibit 42). The attached telephone log from the engineer stated:

> Ernie [Luoto] asked if the mechanical contractor could use 1 inch Armaflex piping insulation in the second floor gang toilet chase in lieu of 1 inch fiberglass. He is concerned that the roof is not yet totally watertight. I stated that this would be acceptable providing the manufacturer's installation instructions for Armaflex insulation are followed.

The CM also notified McDaniel that any additional cost for the materials could be billed against the allowance in their Contract.

Clearly, in each case mentioned by PCM, the Project record indicates that the roofing was not impacting McDaniel's ability to advance the mechanical work. In our experience, it is not uncommon for the mechanical work to be installed prior to the complete installation of the roofing system. An exception might be the pipe or duct insulation that could be subject to water infiltration. As noted above, a pipe insulation change was approved to allow McDaniel to progress the insulation work in the pipe chases and there were also many areas that were protected from the impact of water infiltration. For example, areas of the building protected by roof or floor decking, as long as any penetrations in the decking were sealed, would be able to have insulation work begin. Also, the mechanical insulator can follow directly behind the roofing contractor as they move across the roof; the roof does not have to be 100% complete for the insulation work to begin.

Progress photographs taken on December 11, 2003 provide an indication of the work that McDaniel was able to perform without a watertight building (Exhibit 43). While we are unable to identify the area of the building, water on the floor indicates that this is an area that is not yet completely watertight. Nonetheless, McDaniel is still able to progress their overhead pipe and duct insulation work.

On pages forty-six and forty-seven, PCM continues to discuss the impact of roofing, this time on the building finishes.

> Though it is likely that finish sequences will start prior to the planned completion of roofing in all areas, plus one month lag, as demonstrated in the baseline schedule, as of November 25th, 2003 no drywall finishing has commenced, and given the lack of an operable heating system, and the onset of Winter weather it appears unlikely that finishes will start prior to early March as noted in the impact schedule.

Again, PCM ignores the Project record in creating their impact schedules and forecasting of future events. For example, the November 11, 2003 Construction Progress Meeting Minutes No. 30 state that NDK started hanging drywall in C and D Wings[19] (Exhibit 44) and the December 23, 2003 Construction Progress Meeting Minutes No. 33 state that NDK continued to hang drywall in C and D Wings and that the finishers started on December 23, 2003[20] (Exhibit 45).

With the knowledge that finishes actually begin on December 23, 2003, PCM creates an impact schedule shown on page forty-seven that incorporates a March 5, 2004 start for the critical finishes activity which in turn pushes the Project substantial completion out to January 7, 2005. Clearly, given the actual progress on the Project, the impact schedule created by PCM is flawed.

On page fifty of their narrative, PCM asks an important question regarding the roofing and its impact on interior finishes.

> Given that roofing was to complete July 1st, 2003, and remains substantively incomplete as of March 2nd, eight months later, and in that the roofing drives interior finishes the only question, in computing the impact as of March 2nd, 2003 [2004] is to what extent can initially rough, but more importantly finishes, in any building(s) under roof, commence prior to the completion of all roofing as represented in the contract schedule.

PCM finally recognizes that the Project is six buildings and that the pre-bid construction does not contain the requisite level of detail necessary to create their impact schedules. The answer, in part, to their question is found in the February 17, 2004 Construction Progress Meeting Minutes No. 37 which indicates that painting is complete in C and D

[19] See Item 30.3.9 – "NDK started hanging drywall in Areas "C" and "D"
[20] See Item 33.3.9 – "NDK continues hanging drywall in Areas "C" and "D". Finishers started on 12/23/03. Finishing of the science classrooms needs to be given priority since the casework is scheduled for delivery in early January.

Wings and has started in E Wing[21] (Exhibit 46). The minutes also note that science casework is nearly complete[22].

Progress photographs taken on February 5, 2004 also provide an answer to PCM's question of whether the rough-ins and interior finishes can proceed in a wing prior to the roofing being completed on the entire Project (Exhibit 47). Clearly, the interior finishes have progressed significantly by February 5, 2004, nearly one month earlier than the March 2, 2004 date questioned by PCM on page fifty of their report.

J. Ductwork Shop Drawings

On page fifty-two, PCM briefly discusses the lack of ductwork shop drawing approvals. The issue is raised because of statements made by the CM in the January 20, 2004 Construction Progress Meeting Minutes No. 35 (Exhibit 48). Item 35.3.14 of the meeting minutes state in part:

> EDiS requested that McDaniel provide shop drawings for areas "B", "E", and "F" as soon as possible. McDaniel will provide revised shop drawings for areas "C" and "E" on 1/21/04. No dates were given for the remaining shop drawings. Lack of shop drawings is impacting coordination of the work.
>
> McDaniel previously stated that the lack of roof in areas "A". "B", "F" and "E" is holding up ductwork installation. EDiS stated that ductwork shop drawings for areas "A", "B", and "F" have not been provided, so ductwork should not be fabricated.

PCM responds in their report stating:

> Therefore, at the close of January 2004 McDaniel is giving notice of the impact of not being able to install ductwork and interior HVAC equipment, due to the lack of roofing, in area A, B, E, and F, at that time seven months behind schedule. EDiS's response regarding the approval of duct shop drawings does no [sic] discount the efficacy of the delays

[21] See Item 37.3.19 – "McElroy has completed areas "C" and "D" except for final coat on frames. McElroy started painting in area "E" on 2/16/04."
[22] See Item 37.3.20 – "Science casework installation is nearly complete."

> arising due to the lack of a winter enclosure and their reasonable impact on the contract completion milestone.

McDaniel's activity schedules for each wing of the building, submitted December 2002 and January 2003 indicated that ductwork shop drawings would initially be submitted for A Wing by January 15, 2003 and would conclude on March 28, 2003 with the submittal of B Wing (Exhibit 49). The CM began requesting submission of the ductwork shop drawings as early as the January 21, 2003 Construction Progress Meeting Minutes No. 11, referring to the current schedule (Exhibit 31). As McDaniel submitted ductwork shop drawings they were incomplete and incorrect. For example, on August 20, 2003, the CM returned McDaniel's C Wing, 2nd floor ductwork shop drawings "without action", citing a significant number of discrepancies that required correction prior to the drawings being submitted to the Architect and Engineer (Exhibit 50). On October 8, 2003 the CM notified McDaniel that late ductwork shop drawings had been addressed for the past several months with no resolution (Exhibit 51). The October 8, 2003 letter informed McDaniel that:

> These shop drawings are critical to coordination with other trades, fire marshal review, and the prosecution of the work. Immediate action is needed to provide all of the remaining duct shop drawings for the project. The priority for the submissions should be '2D', Kitchen, 'E', 'F', 'A' (resubmittal), 'B'.

The CM pointed out that the duct shop drawings were not only being used for the fabrication of the ductwork itself but also for other contractors to coordinate their work around the larger ductwork installations.

McDaniel's ductwork shop drawing submissions did not improve. On November 24, 2003, the CM notified McDaniel that upon review of ductwork shop drawings received for A and E Wings, the E Wing drawings were not forwarded to the Architect and Engineer because they failed to include the awarded alternate for the additional classroom in E Wing (Exhibit 52). On January 5, 2004, the CM again notified McDaniel

that upon review of the new duct shop drawings for B and F Wings and the revised shop drawings for A, C, D and E Wings, only the D Wing drawings were satisfactory enough to forward to the Architect and Engineer (Exhibit 53). The January 5, 2004 letter stated that:

> The revised shop drawings did not completely address the engineer's original comments. You must address all of the engineer's comments before submitting revised shop drawings.
>
> The new shop drawings are copies of the contract drawings and are not fabrication drawings. The engineer has repeatedly identified this problem in the past. The shop drawings must show the actual construction of the ductwork system.
>
> The shop drawings for areas 'A', 'B', 'C', 'E' and 'F' are being returned "Without Action". Please resubmit revised shop drawings as soon as possible. As you know these shop drawings are on the critical path and this is having an impact on the project schedule.

Almost ten months beyond the March 28, 2003 date provided in McDaniel's activity schedules for the final ductwork shop drawing submittal in B Wing, McDaniel was still submitting for approval, all wings of the building.

In addition, ductwork installation in the field had begun on June 26, 2003 in A Wing. On September 16, 2003 (Exhibit 54) the Engineer provided the following comments following a field review of the ductwork installation on that date:

> This comment concerns the round duct taps off the supply air duct main, running from the supply main to the inlet of the VAV boxes: These taps are installed with volume dampers in the tap. These taps should **not** have volume dampers and they must be removed and a new tap installed. The Area "A" second floor sheetmetal shop drawing (15815-02) did not show volume dampers in these taps, so I don't understand how they got installed.
>
> Also, this same shop drawing (15815-02 and all subsequent sheetmetal shop drawings that I have received) show this duct tap to be a 45 degree lead-in branch connection, and that is the connection that I approved when reviewing the shop drawing. … The duct tap installed in the field is a straight flanged tee connection. The sheetmetal shop drawings are supposed to be the **fabrication** drawings, and what I see and approve on the shop drawing I expect to see out in the field. Otherwise I am wasting my time reviewing these shop drawings. I would like an

> explanation as to why the shop drawing and the installed duct have different connections. Please pay attention when preparing the sheetmetal shop drawings and show the fittings as they are actually going to be fabricated and installed.

Clearly, the Engineer was becoming extremely frustrated with the ductwork shop drawing process and on February 22, 2004 expressed that frustration in a memorandum to the CM (Exhibit 55). The memorandum states, in part:

> Our office is returning three sets of sheetmetal shop drawings marked "Rejected". I have attached the [sic] several of the submittal covers from this set of reviews and previous reviews for your reference. One can not clearly understand the deplorable condition of the shop drawings without unrolling and reviewing the coments [sic] that have been on the drawings themselves.
>
> There remains a complete lack of quality and any attention to detail in the sheetmetal submittals and the submittal process. The submittals should represent fabrication drawings and should be approved before any ductwork is fabricated, shipped to the field or installed. McDaniel Plumbing and Heating has completely ignored this process and EDIS (and in part the design team) have allowed them to do so. Sheetmetal installation has continued and even been completed before we get to an "approved" set of sheetmetal shop drawings.
>
> It is apparent that McDaniel Heating and Plumbing sees this as a mere formality and desires to get their submittals approved purely by wearing down the personnel reviewing the drawings and also making the review process pointless because the work has already been completed. This is not acceptable.
>
> No further sheetmetal should be fabricated, delivered to the site, or installed for any areas that have not been reviewed and "approved".
>
> The quality of the sheetmetal shop drawings continues to degrade. … The current sheetmetal shop drawings appear to be done by someone who is not familiar with HVAC ductwork much less the SMACNA standards that are supposed to be incorporated into the work. The drawings are grossly inconsistent, contain imaginary fittings, transitions, elbows, etc. that do not meet SMACNA standards, and in many instances are not legible. (emphasis added)

The Engineer was no longer willing to allow McDaniel to install ductwork without approved shop drawings as they had been doing for the past eight months. The March

2, 2004 Construction Progress Meeting Minutes No. 38 (Exhibit 56) reflects the Engineer's February 22, 2004 directive in item 38.2.2:

> McDaniel furnished duct shop drawings for Areas "A", "F" and "B" on 2/16/04. These shop drawings have been rejected by the Engineer. McDaniel was provided with a memorandum from the Engineer regarding the rejection of these submittals. Ductwork in Areas "A", "F" and "B" is on hold until these issues are resolved. (emphasis added)

In addition, the two-week look-ahead schedule attached to the March 2, 2004 Construction Progress Meeting Minutes No. 38 indicated that the ductwork in A, B, F and E Wings was late. The March 30, 2004 Construction Progress Meeting Minutes No. 40 (Exhibit 57) reported in item 40.2.1 that:

> McDaniel has furnished revised duct shop drawings for Areas "1A" and "F". McDaniel reported that the revised shop drawings for area "B" will be provided on 4/5/04. McDaniel is permitted to install ductwork in area "F", except for the exposed spiral ducts. Ductwork in Areas "1A" and "B" will not proceed without approved shop drawings.

McDaniel was also requested to increase their manpower to regain the ductwork schedule in areas 2A and F.

The B Wing duct shop drawings were finally submitted by McDaniel on or about May 11, 2004, approximately fourteen months after the March 28, 2003 date for final submission provided by McDaniel in their activity schedule for B Wing (Exhibit 49). The May 25, 2004 Construction Progress Meeting Minutes No. 44 (Exhibit 58) notes that the Architect returned the duct shop drawings for B Wing on May 25, 2004. Only then was McDaniel in a position to begin ductwork fabrication, deliver the fabricated ductwork to the Project and install the ductwork in B Wing. The May 25, 2004 Construction Progress Meeting Minutes No. 44 also provided several comments by the CM that indicated the impact of late shop drawings and ductwork installation created by the Engineer's February 22, 2004 hold on ductwork installation pending approved shop drawings in A, F and B Wings. Item 44.2.1 states:

> Area "F" – all contractors were advised that work above gypsum ceilings must be given priority. McDaniel still continues to impact the work in this area. Painting in the gymnasium is complete.
>
> Area "A" – Priority must be given to ductwork, piping and insulation above ceilings on the 2nd floor. McDaniel was advised that they are impacting the follow-on trades in this area.

While we have only mentioned several notations in the construction progress meeting minutes, the meeting minutes contain numerous similar notations which reflect that McDaniel is behind on duct rough-in and that they are impacting other contractors. Clearly, the late and incomplete submission of ductwork shop drawings by McDaniel throughout the period of construction caused an impact to the other contractors working on the Project. In our opinion, PCM's dismissal of this important aspect of the actual progress of the Project is a serious omission. On page sixty-five of their report, PCM states:

> With McDaniel being admonished daily for their supposed role in delaying the contract, the B building is a prime example of delinquent work by a varied group of those contractors that in fact delayed prior performance and placed McDaniel, and ultimately the project, in this delinquent state as of June of 2004, approximately two months prior to planned substantial completion.

PCM notes that the B Wing roofing is not completed until June 25, 2004 while they ignore the fact that McDaniel finally received approval to fabricate B Wing ductwork one month earlier, on May 25, 2004. As noted earlier, B Wing completion was ultimately extended to October and November 2004 while the contractors were instructed to focus their efforts on A, C, D, E and F Wings of the Project. McDaniel was admonished daily for not completing work that they agreed to complete during the construction progress meetings and thereby impacting the ability of follow-on contractors to progress their work.

K. Mechanical Systems

On page sixty-nine of their report PCM states:

> In early June McDaniel keeps moving to completing critical performance milestones, including the piping of the boiler room, D and E building AHU's on June 8th, and completing piping of A and C penthouses on June 22nd. Though these areas will come under later review for alternate piping and duct layout, they are in fact in operation and afford the school a certificate of occupancy well before the appropriate impacted completion date.

PCM is correct in stating that in early June McDaniel was moving toward completing critical performance milestones, including the piping of the boiler rooms. The March 2, 2004 Construction Progress Meeting Minutes No. 38 (Exhibit 56) stated in item 38.3.14 that:

> McDaniel is installing piping and equipment in the boiler room. The boiler should be operational by the end of March, 2004.

On May 4, 2004 the CM met with McDaniel to discuss the outstanding mechanical work that was impacting the Project. A May 5, 2004 memorandum of that meeting was prepared by the CM (Exhibit 59). The memorandum states in item number three that:

> Mr. McCone opened the meeting by reminding Mr. McDaniel that the building must be completed and ready for occupancy by the end of August 2004. The primary concern is to get conditioned air into the completed spaces. EDiS presented a recovery schedule, to Mr. McDaniel, outlining what it considers to be achievable milestones for completing the mechanical systems. The schedule was reviewed and Mr. McDaniel had no major objections. Mr. McDaniel would review it further and provide feedback on how he intends to meet this schedule. (emphasis added)

The recovery schedule attached to the May 5, 2004 memorandum indicates that heat piping, pumps and controls would be complete by May 14, 2004 and that the filling of the heating system would occur from May 26, 2004 to May 27, 2004.

On May [1]7, 2004, the CM forwarded to McDaniel a preliminary piping inspection report issued by the Engineer following their May 14, 2004 field review of the mechanical room (Exhibit 60). The Engineer noted in her report that:

> In general, the piping systems in the Mechanical Rm. F133 are satisfactory. Much work still needs to be done, and details such as thermometers, pressure gauges, vents, flow meter fittings, etc. still need to be installed. But McDaniel's crew is doing a nice job in the Mech. Room, and we assume will continue to do so until completion.

The comments from the Engineer regarding the incomplete piping in the mechanical room came a month and a half after the stated completion date of boiler piping in the March 2, 2004 Construction Progress Meeting Minutes No. 38 and on the very date that the recovery schedule from the May 4, 2004 meeting indicated the heat piping, pumps and controls were to be completed. Each of construction progress meeting minutes from April through May 2004 noted that the boiler piping was ongoing and that it had been scheduled for completion in late March 2004. Finally, the June 22, 2004 Construction Progress Meeting Minutes No. 46 (Exhibit 61) indicated in item 46.3.14 that:

> McDaniel is complete with installation of piping and equipment in the boiler room. They have filled and flushed the heating system. Start up of the boiler is scheduled for this week.

Subsequent progress meeting minutes indicate that McDaniel was unable to begin the boiler start-up process until July 27, 2004. The July 27, 2004 Construction Progress Meeting Minutes No. 50 (Exhibit 62) note in item 50.3.14:

> McDaniel completed installation of piping and equipment in the boiler room. Start up of the boiler was attempted on 7/27/04; McDaniel has to make corrections to the piping before the start-up can be completed.

McDaniel continued to work on the boiler system for the next two months. On September 24, 2004, the Engineer memorialized a telephone conversation with Tate Engineering, the boiler start-up contractor, discussing corrective actions required to make the boiler system fully functional (Exhibit 63). The Engineer's memorandum listed numerous items requiring correction. As noted earlier in this narrative, on September

29, 2004 (Exhibit 4), McDaniel was notified that their workforce was being supplemented for work associated with the heating system.

PCM's contention that the boilers were brought on-line and were operational in June 2004 is clearly incorrect as noted by the Project record listed above. The milestone for completion of the boilers was late March 2004 as memorialized in the construction progress meeting minutes and as of September 29, 2004, when McDaniel's workforce was supplemented for work associated with the heating system, the systems were still incomplete.

With respect to PCM's contention that the D and E Wing air handling units were complete and operational by June 8, 2004 and the A and C Wing piping was complete by June 22, 2004, a review of the Project record indicates that this is also incorrect. As noted earlier, the CM met with McDaniel on May 4, 2004 and reviewed a recovery schedule outlining the completion of major milestones (Exhibit 59). The recovery schedule indicated that McDaniel would complete the C Wing penthouse by May 18, 2004; the D Wing penthouse by May 21, 2004; the E Wing penthouse by May 25, 2004; and the A Wing penthouse by May 28, 2004. The schedule also indicated that the air handling units and chilled water system would be fully operational by June 16, 2004. The May 11, 2004 Construction Progress Meeting Minutes No. 43 (Exhibit 64) confirmed those dates in item 43.3.14.

On June 7, 2004, the CM notified McDaniel that a June 4, 2004 follow-up inspection of the piping in the penthouses revealed the following (Exhibit 65):

> We noticed that piping was insulated yet the work was incomplete. The thermometers, pressure gages, vents, and flow meters were not installed and the strainer was installed in a manner that made is [it] unserviceable.
>
> The piping deficiencies must be corrected before the chilled water system will be brought on line. We will not turn the system on just to shut it down and make corrections at a later date.

The July 6, 2004 Construction Progress Meeting Minutes No. 47 noted that ductwork and controls were incomplete, although the air handlers were on-line in the A, C, D and E Wings (Exhibit 66). While the air handlers were on-line, an August 9, 2004 letter from the CM to McDaniel (Exhibit 67) included several lists of incomplete work in the penthouses. As was the case with the heating system, McDaniel failed to complete their contract work in the mechanical penthouses and on August 27, 2004, IRSD supplemented their workforce to complete that work (Exhibit 3).

Again PCM's contention that the D and E Wing air handling units were complete and on-line by June 8, 2004 is inconsistent with the Project records. While the piping for the A and C Wing air handling units was complete by June 22, 2004, performance of the work in all four wings went significantly beyond the May 28, 2004 completion date agreed to by Mr. McDaniel in the May 4, 2004 meeting held with the CM. With both the heating system and the HVAC system, McDaniel agreed to perform their work in accordance with a specific schedule and failed to do so.

L. Termination

On page seventy-five PCM states:

> The simple fact that the management team was unwilling to implement an equitable adjustment to the contract to afford more time, that ultimately would alienate the owner, but relieve much of the impact incurred by McDaniel demonstrates the mindset that resulted in this termination.

PCM discusses an adjustment to the Contract to afford more time. As noted early in this narrative, those adjustments were made throughout the scheduling process on this Project. The contractors were provided with additional time between May 31, 2004 and August 2, 2004 that was originally scheduled for final punch and move-in. The

contractors were told to defer work in B Wing until their work in A, C, D, E and F Wings was complete. On June 25, 2004, the CM notified the contractors in the cover letter submitted with the June 21, 2004 updated construction progress schedule that the schedule reflected an extension of time for the work in B Wing (Exhibit 106). Late in the Project, the construction progress meeting minutes continue to schedule past the August 2, 2004 Project Completion date in an effort to complete the work in the A, C, D, E and F Wings prior to the September 7, 2004 school opening.

McDaniel was not terminated on October 11, 2004 for delaying the Project. The October 11, 2004 correspondence from IRSD notifying McDaniel of the termination stated (Exhibit 6):

> Pursuant to ¶14.2.1 of the General Conditions, McDaniel has repeatedly refused or failed to supply enough properly skilled workers or provide proper materials on the Project.

Pursuant to the Contract, the Architect stated in their letter of October 11, 2004 to IRSD that:

> We have inspected the progress and quality of McDaniel's work to date, as has our mechanical engineering consultant Allen & Shariff Corporation, and in accordance with Section 14.2.2 of the General Conditions certify that sufficient cause exists to justify termination of the contractor pursuant to Section 14.2.1 of the General Conditions.

McDaniel's certified payrolls show that immediately following the opening of the school on September 7, 2004, their manpower dropped to between five and seven workers (Exhibit 68). In the Architect's and IRSD's opinion, manpower at that level would not have allowed McDaniel to maintain the current schedule for completion of the mechanical punchlist work and the completion of B Wing mechanical, plumbing and ATC work.

M. Estimate of Material and Labor Overruns

PCM's report incorporates several cost calculations. The cost calculations on pages seventy-six through eighty-three total $755,571.00. This total is comprised of $96,963.00 in alleged extended home office overhead, $99,140.00 in alleged extended field office overhead and $430,968.00 in alleged wage escalation, material escalation and labor inefficiency. In addition to the costs listed above, PCM also includes ten percent overhead on the alleged extended field office overhead, wage escalation, material escalation and labor inefficiency and ten percent profit and one percent bond on the alleged extended home office overhead, extended field office overhead, wage escalation, material escalation and labor inefficiency.

McDaniel has never asserted a claim for damages either during construction or after their termination. To our knowledge, McDaniel is not a party to this case and RLI has not claimed for delay and/or damages in the pleadings. For that reason, we do not understand why the PCM report for delay and damages has been submitted. The alleged damages are not supported by narrative explanation or a single exhibit providing the underlying data for the calculations. Unlike the earlier portions of the PCM report, very little cost information was produced. In fact, the only documents that were produced from McDaniel were done so through RLI. We have seen McDaniel's original estimate, accounts payable invoice lists dated August 12, 2004, November 11, 2004 and January 21, 2005, a purchase order list, subcontractor list, accounts receivable invoice aging report, accounts payable invoice aging report, each dated August 9, 2004, a job cost summary dated August 10, 2004, a job status report dated July 9, 2006, a summary of job costs dated April 24, 2007 and income statements from 2003, 2004 and 2005. Nonetheless, we will provide a brief review of the calculations.

PCM notes on page seventy-six of their report that the costs are "McDaniel's cost/estimated expenses …" (emphasis added). In our opinion the claimed amounts should be based on actual costs rather than any estimated expenses as indicated. In addition, in our opinion, PCM's report is incorrect with respect to the extent of the delay they are asserting in the calculation of alleged extended home office overhead. For example, the dates listed on page seventy-six with the extended home office overhead calculations indicate that the Notice to Proceed date was August 28, 2002, that the original Substantial Completion date was May 31, 2004 and that the actual Contract termination date was November 14, 2004. The pre-bid construction schedule contemplates that the Contractor will be required to remain on site performing final punch work through Project Completion, August 2, 2004 (Exhibit 2) and the actual Contract termination date was October 11, 2004 (Exhibit 6); therefore, if McDaniel were entitled to any extended home office overhead the greatest duration possible would be seventy calendar days from August 3, 2004 through October 11, 2004.

Finally, PCM has calculated that the Sussex Central High School's prorated share of McDaniel's total home office overhead for the period of the Contract (August 28, 2002 – November 14, 2004) is $581.00 per day. As indicated above, the November 14, 2004 actual Contract termination date utilized by PCM is incorrect and therefore the calculation of the per diem rate utilized is also incorrect. If we were to assume that the $581.00 per day rate were correct, based on the greatest extended duration possible, seventy calendar days, McDaniel would be entitled to no more than 41.9% of the amount requested in PCM's report for the alleged home office overhead.

PCM has utilized the Eichleay formula in calculating the alleged home office overhead. The Eichleay formula has received inconsistent treatment by courts and boards since its inception in 1960. Most recently, courts have held that a contractor's work on a project must have been suspended and that the contractor was unable to

secure additional work that would serve to mitigate the damages. Clearly we do not have that situation in this case. In utilizing the Eichleay formula, there are also certain costs that have been declared unallowable and are required to be removed from a contractor's home office overhead pool. Examples of those unallowable costs are: interest on borrowings, entertainment costs, contributions and/or donations, losses on other contracts, bid and proposal costs and bad debts. In addition, advertising expenses are allowable only in connection with recruitment, acquisition of special items required for the contract or the disposition of scrap or surplus material. PCM did not remove any of these unallowable items from McDaniel's overhead pool. McDaniel's overhead pool includes expenses for advertising and promotion, travel, meals and entertainment, charity donations, interest expense and equipment interest expense (Exhibit 69). In our opinion, the Eichleay formula does not apply in this situation because there was never a suspension of work on the Project. Further, PCM has failed to make the proper adjustments to McDaniel's home office overhead, adjustments that are necessary to properly use the formula.

The second component of costs that PCM calculates is alleged extended field overhead. We have no supporting documentation for these calculations. Many of the calculations appear to simply be estimates. For example, Roger Dill, the piping foreman is estimated to only be 25% productive in the field and the remaining 75% of his time is attributable to his duties as a Project foreman and therefore attributable to field office overhead. The total wage rate utilized by PCM is the base wage rate plus 22% McDaniel's contributions. We assumed that the 22% McDaniel's contributions is the labor burden. The determination of the 22% McDaniel's contributions is completely unsupported, although a review of the certified payrolls (Exhibit 68) indicates that the "hourly value of fringes" for Roger Dill's base wage rate of $33.00 per hour is $3.89 or approximately 11.8%. Without supporting documentation we are unable to determine why PCM has utilized a 22% markup rather than the 11.8% shown on the certified

payrolls. The same applies to Matt Fagan, the sheetmetal foreman. PCM has determined a daily rate for project vehicles, telephones and cell phones. We have no indication of the individuals using the vehicles, telephones and cell phones or any documentation to support the costs reported. PCM has indicated a monthly gasoline allowance of $400.00. We have no indication of the individuals that are allegedly allowed a gasoline allowance although, the $43.33 per diem rate utilized by PCM appears to be extremely high. If we multiply the $43.33 per diem rate by the 809 calendar day duration of the Project that PCM utilized in their home office overhead calculation, we find that equates to $35,053.97 in gas allowance for the Project. If we divide the $35,053.97 in gas allowance by the $400.00 per month, we find that it is the equivalent 87.6 months of gas allowance paid by McDaniel. Again, using PCM's 27 month duration (August 28, 2002 – November 14, 2004) in their home office overhead calculation, 3.25 McDaniel employees were receiving the $400.00 per month gas allowance. PCM includes a long list of large tools but apparently only eight tools are included to make up the $66.64 per diem rate utilized.

PCM calculates a per diem rate of $971.87 and multiplies it times seventy-nine days of alleged delay. The delay period utilized by PCM is from August 6, 2004 through October 24, 2004. The delay period is completely different from that used in the calculation of alleged extended home office overhead. There is no explanation for either the starting date or for the ending date although as mentioned earlier, in our opinion the duration can be no greater than seventy calendar days, the original Project Completion date of August 2, 2004 through McDaniel's termination date of October 11, 2004. PCM also adds the expenses for a Project office trailer and backhoe rentals. We are unable to opine on either of those elements because no supporting invoices have been provided.

Finally, PCM's calculation for alleged labor loss of efficiency is virtually indecipherable. The spreadsheet is not formatted for the page and it is extremely difficult to understand the columns. Nonetheless, we will provide comments on the portions that we can decipher. As with the entire PCM report, there are no supporting exhibits to assist in understanding PCM's labor loss of efficiency spreadsheet found on pages eighty and eighty-one. Our review of McDaniel's original estimate (Exhibit 70) indicates that the total labor bid cost is $866,747.26, comprised of $643,651.26 for direct labor, $205,516.00 for indirect labor and $17,580.00 for non-productive labor. The total labor hours included in McDaniel's original bid was 25,767.17 hours, comprised of 19,989.17 hours for direct labor, 5,278 hours for indirect labor and 500 hours for non-productive labor. We should point out that the original estimate included lump sum calculations of $1,500.00 each in the non-productive labor category for Pipe ID and Valve Charts and Tags. PCM reports that the total labor bid was 30,249 hours and $911,051.00, both higher than reflected in the bid estimate. Two areas that PCM reported labor for were sheetmetal and insulation whereas the original estimate contemplated subcontractors for both of those areas of work.

PCM's spreadsheet appears to indicate that the shop labor, we assume for ductwork, was $114,292.00. We note that the shop labor expense was obtained by PCM from a McDaniel memorandum dated July 30, 2007, the same day that their report was dated. We have never seen the referenced memorandum. We have reviewed Exhibit 63 to Mr. McDaniel's deposition and find that the calculation of indirect costs for the Project included only $68,884.92 for shop labor (Exhibit 99). Again, without the documents that PCM utilized we are unable to reconcile the different numbers for shop labor.

PCM apparently calculated the actual total labor expended on the Project by McDaniel as $1,472,664.00, comprised of $1,358,372.00 and the $114,292.00 for shop

labor. PCM then calculated the total labor overrun on the Project as the difference in the $1,472,664.00 actual total labor expended and the $911,051.00 allegedly contained in McDaniel's original bid. PCM then removed labor that it claimed was in the alleged extended field overhead calculation and labor in change orders. The net labor overrun as proffered by PCM is $430,968.00.

PCM's calculation of labor loss of efficiency is a modified total cost calculation. The only two modifications that PCM made to the alleged labor overrun was deducting the labor expended for approved change orders and for labor requested elsewhere in their report. There was apparently no attempt to identify areas of work where McDaniel had to correct deficiencies that were not the responsibility of the Owner. There were numerous deficiency reports provided by the Engineer as a result of their inspections. For example, the labor expended by McDaniel for returning to correct work associated with the Engineer's January 20, 2004 above ceiling inspection in C Wing (Exhibit 71) should be backed out of the alleged labor overrun. The March 16, 2004 memorandum (Exhibit 72) from the CM that memorialized a March 9, 2004 meeting between the CM, the Engineer and McDaniel provides other examples. The letter states in part:

> A&S checked a portion of ductwork in area 'D' that was approved as noted on the shop drawings. This duct was not fabricated per the approved shop drawings. McDaniel acknowledged that this ductwork will have to be removed and replaced.
>
> The layout and configuration of the return fans in the penthouses over areas 'C', 'D' and 'E' were reviewed. The return fans are going to obstruct the operation of access doors on the AHU's. McDaniel is going to contact the factory to see if dutch doors could be made. These fans also conflict with the variable frequency drives (VFD's). The VFD's in penthouses 'C' and 'E' will have to be moved.

Ductwork removed, re-fabricated and replaced and variable frequency drives moved are all deficiencies that should have the labor associated with that work removed from the alleged labor overrun. There are many more examples of similar deficiencies that should be removed from the alleged labor overrun. PCM's labor loss of efficiency

spreadsheet assumes that McDaniel did absolutely nothing on the Project to cause any loss of efficiency during the Project. The information cited above regarding the original estimate and the McDaniel responsible deficiencies indicate that the calculation provided by PCM is flawed and should therefore be dismissed.

In addition, $4,041,863.00 has been paid to or on behalf of McDaniel to date by IRSD (Exhibit 98). If McDaniel received the amount listed in the PCM report then they would receive the following for work on the Sussex Central High School Project:

Paid to Date by IRSD	$4,041,863.00
PCM Claim Total	$ 755,571.00
Total	$4,797,434.00

Payment of the amount listed by PCM would provide McDaniel with $308,349.06 more than their total direct costs, indirect costs and office overhead of $4,489,084.94 expended on the Project (Exhibit 99). Also, Mr. McDaniel indicated in his deposition that the $4,489,084.94 in job costs included costs paid by RLI as well[23]. In our opinion, this is an indication that the PCM total cost claim is significantly overstated.

Finally, our review of the Contract reveals that the Supplementary Conditions of the Contract for Construction (Exhibit 14), Article 8.3.2 states:

> The Contractor recognizes that delays, acceleration, or hindrances may occur. No claims for increased cost, charges, expenses or damages of any kind shall be made by the Contractor against the Owner or Construction Manager for any delays, acceleration or hindrances from any cause whatsoever, including, but not limited to, strikes, walkouts, extended overhead, winter protection or work stoppages during the

[23] See McDaniel deposition, page 266, line 18 through page 267, line 2 – Q: Is it your understanding that the completion costs that were paid by RLI, some or all of which were summarized in Berry 4 are included in the costs shown on Exhibit McDaniel 63? A: I believe they are. Q: And are the payment bond claims paid by RLI some or all of which are summarized on Berry 4 included in the costs shown on Exhibit McDaniel 63? A: I believe they are.

> progress of any portion of the Work; provided, that the Owner, in its discretion, may compensate the Contractor for such delays, acceleration or hindrances by extending the time for completion of the Work as provided in the Contract Documents and any such extension shall constitute the sole and exclusive remedy between the Owner and the Contractor. … (emphasis added)

And, the General Conditions of the Contract for Construction (Exhibit 14), Article 4.7.3 states:

> Claims by either party must be made within 21 days after occurrence of the event giving rise to such Claim or within 21 days after the claimant first recognizes the condition giving rise to the Claim, whichever is later. Claims must be made by written notice. … (emphasis added)

Pursuant to the contract provisions cited above, McDaniel is not entitled to additional costs for the issues presented in the PCM report. In addition, McDaniel has failed to provide proper notice of additional cost to the Architect. It is important to note that to this date McDaniel has never asserted a damage claim to IRSD. To our knowledge, RLI has also not asserted a claim for McDaniel Plumbing and Heating damages in their pleadings in this case.

VI. Review of CSF Report

A. Overview

CSF was retained by RLI to perform a review of the Project records of McDaniel Plumbing and Heating. RLI had provided performance and payment bonds on McDaniel's behalf, for the Sussex Central High School Project. Specifically, CSF was to evaluate McDaniel's financial status and work with McDaniel to develop a cost to complete the remaining mechanical, plumbing and ATC scope of work.

Following their review of the Project records, CSF concluded that IRSD advanced payments to McDaniel for work that was either incomplete or deficient. In a

November 12, 2004 letter Mr. Harry R. Blackburn, on behalf of RLI (Exhibit 73), notified IRSD that:

> … RLI was distressed to learn that significant overpayments have apparently been made for work which either was not done or was not completed or which was defective. For example, the line item for duct work was paid at 100% yet there remains over ¼ mile of duct to be installed. Additionally, there was a payment in the amount of $78,315.40 made by the School District to McDaniel Plumbing & Heating on August 16th, 2004, notwithstanding a request made on July 27, 2004 by Mr. David Berry of RLI to Mr. Chris McCone of EDiS demanding that "no further funds arising from … contract …" be advanced without the consent and direction of RLI. …
>
> In summary, Mr. Baldassarre found that the total amount billed on the project by McDaniel Plumbing & Heating was $4,265,540.00, of which $4,041,863.00 was paid to McDaniel Plumbing & Heating by your client [IRSD]. The School District retained $223,677.00, leaving $84,931.00 left to be billed on the contract. The retainage combined with the unbilled amount leaves a total to [of] $308,608.00 in the contract value unpaid on this project. …
>
> In light of this recent development and startling information that I have outlined above, the Surety must regrettably reject the demand made by the School District to complete the contract and advise the School District that it believes there is or should be more than sufficient money to complete the project. …

The information prepared by CSF apparently lead to RLI's decision not to complete the McDaniel scope of work on the Project.

CSF also reviewed the IRSD claim for expenses that it incurred completing McDaniel's scope of work. The costs were the result of RLI's rejection of IRSD's demand that the Surety complete McDaniel's Contract.

CSF's conclusions state:

> Based on the information reviewed from the project record, we conclude that the Owner, through its consultants, knowingly did not fulfill its obligations to the surety under the McDaniel Contract and Bond. The Owner failures include:
>
> - Payment for unacceptable workmanship

- Payment for incomplete work
- Failure to retain additional funds for improper workmanship
- Disbursement of contract funds to McDaniel without the Surety's prior approval
- Diverting contract funds to other contractors without the Surety's prior approval
- Undertaking completion (prior to termination) without properly notifying the Surety
- Failure to replenish the contract balance for overpayment of contract funds to McDaniel
- Claimed reimbursement for items that were not part of the contract scope of work

> The Owner's actions directly contributed to the depletion of the contract funds.
>
> Additionally, the Owner and its consultants allowed Zimmer to work without a defined scope of work or budget, and without adequate supervision.
>
> Based on the Owner's failure to perform its duties under the contract and bond we conclude that the Owner default has not be [been] remedied under the terms and conditions of the bond.

Our review of the Project record indicates that CSF's claims of default by IRSD are without merit. IRSD fulfilled its obligations under the Contract. The General Conditions for the Contract for Construction (Exhibit 14) are clear, Article 9.6.1:

> After the Construction Manager and Architect have issued a Project Certificate for Payment, the Owner shall make payment in the manner and within the time provided in the Contract Documents, and shall so notify the Construction Manager and Architect.

And Article 9.7.1 in part:

> If, through no fault of the Contractor, … or 2) the Owner does not pay the Contractor within seven days after the date established in the Contract Documents the amount certified by the Construction Manager and Architect or awarded by arbitration, then the Contractor may, upon seven additional days' written notice to the Owner, Construction Manager and Architect, stop the Work until payment of the amount owing has been received. The Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shut-down, delay and start-up, which shall be accomplished as provided in Article 7.

Pursuant to the Contract, IRSD and McDaniel agreed that the CM and Architect were responsible for exercising their judgment and discretion to determine the certified amounts on payment applications. Following their certification, IRSD was obligated to pay McDaniel the amounts certified.

The following sections respond to the details of CSF's July 31, 2007 report.

B. Initial Review and Default Termination

CSF identifies the "planned construction schedule" on page four of their report. We point out that the schedule identified is not the pre-bid construction schedule that was identified by PCM as the Contract schedule but rather a September 10, 2002 construction progress schedule reviewed at the September 17, 2002 Construction Progress Meeting[24] (Exhibit 29).

With respect to scheduling, CSF states on page five of their report:

> The contract included a schedule that showed the project completion on August 2, 2004. The schedule was reviewed at each project meeting, and the discussion was recorded in the meeting minutes. A revised schedule, accepted by all prime contractors, was not issued. (emphasis added)

The schedule that was reviewed and discussed at each progress meeting was an updated or revised schedule. The Contract did not provide a requirement for approval of schedule revisions by the prime contractors. Specifications Section 01305.2.2.4 states:

> The Construction Manager will incorporate approved schedule revisions into the Project Construction Schedule, and shall otherwise update and revise the Project Construction Schedule as the Construction Manager, at his sole discretion, deems necessary. (emphasis added)

[24] See item 2.2.5 which states "EDIS reviewed the current schedule dated 10 Sep '02. During the meeting, adjustments were made to the schedule. The revised schedule dated 18 Sep '02, is attached. It was discussed and agreed that the duration of activity for footers and piers for Area A would be increased to three weeks."

The Contract clearly contemplated schedule updates and revisions and gave the CM the sole discretion to make those changes and issue updated and/or revised schedules. The discussion that was recorded in the construction progress meeting minutes generally requested that the contractors review the schedule attached to the meeting minutes and to identify revisions to the CM[25].

CSF notes on page five of their report that:

> McDaniel was awarded the contract to perform the HVAC and Plumbing installation for the new school on November 10, 2002. The contract amount was $4,335,500. (emphasis added)

McDaniel's Contract, which was actually dated August 28, 2002, included an August 28, 2002 letter from the CM to McDaniel that stated:

> On behalf of the Indian River School District, we are authorizing you to proceed with the work associated with Contract No. SC-B-14 Mechanical, Plumbing & ATC. It is Indian [River] School District's intention to issue a contract in the amount of $4,335,500 for this work as follows: …

McDaniel was awarded the Contract for the Mechanical, Plumbing and ATC scope of work and issued a notice to proceed on August 28, 2002, not November 10, 2002 as noted by CSF.

On page six of their report CSF states:

> We also noted that three payments – Applications 22, 23R and 24 were released subsequent to RLI's July 27 letter, without written consent of RLI. These payments totaled $389,918.60. (emphasis added)

[25] See Construction Progress Meeting Minutes No. 5, dated October 29, 2002, item 5.2.5, which states "EDIS reviewed the current schedule dated 17 October 2002. During the meeting, adjustments were made to the schedule. After the meeting, EDIS added activities for windows, roofing, mechanical, electrical and fire sprinkler. All contractors are asked to review the schedule and identify any revisions to EDIS. The revised scheduled [sic] dated 31 October 2002, is attached. … (emphasis added) (Exhibit 28)

As a result of receiving an increasing amount of claims against the McDaniel payment bond that they had issued, RLI sent a letter on July 27, 2004 to the CM demanding that they release no further funds arising from the McDaniel Contract with IRSD without the advanced written consent and direction of RLI (Exhibit 74). On August 17, 2004, counsel for RLI notified counsel for the CM (Exhibit 75) that:

> Finally, it is my understanding that you are faxing to me a list of the joint checks that have been issued which were being sent out so that the Surety would know where such checks are going. Please be advised that notwithstanding my client's previous directive to hold distribution of any funds, we agree with the issuance of the joint checks at this point and authorize their release. … (emphasis added)

CSF is incorrect in its assessment that Contract funds were released without the written consent of RLI following their July 27, 2002 demand. Clearly, RLI's counsel authorized the release of joint checks on August 17, 2004. In addition, the joint checks ensured that the Contract monies were used to pay Contract expenses; therefore RLI's interest was protected.

Pursuant to their discussions with McDaniel in August of 2004 regarding the many iterations of the punchlists issued by the Engineers, CSF reports on page seven that:

> McDaniel's position was that he knew the work had to be corrected or completed, but the primary objective was to get the systems on line for occupancy. McDaniel's plan was to return to the areas after occupancy to complete the punchlists.

McDaniel had been issued inspection reports from the Engineers as early as September 16, 2003 with the review of mechanical rough-ins (Exhibit 54) and had been directed to correct the deficiencies listed in each inspection report immediately. On March 16, 2004, the CM memorialized a March 9, 2004 meeting held with McDaniel to discuss ductwork shop drawings and the status of above ceiling inspections by the Engineer (Exhibit 72). The list contained in the memorandum indicates that the CM and Engineer did not share McDaniel's expectation that the work could be corrected or completed

after occupancy. In addition, immediately following the September 7, 2004 opening of the school, with the exception of the B Wing, McDaniel's manpower dropped from approximately seventeen workers to only five to seven workers. McDaniel did not follow through with their plan to pursue the correction of punchlists and completion of the mechanical, plumbing and ATC scope of work following occupancy as they had indicated to CSF in August 2004.

Following their investigation of the Project record, CSF recommended to RLI in September 2004 that McDaniel be provided the financial support to complete the Project[26]. CSF reports that RLI concurred with CSF's recommendation and advanced funds to a trust account established for the project for distribution on behalf of McDaniel as construction progressed. As noted above, following the September 7, 2004 school opening McDaniel's manpower dropped significantly and construction did not progress. In fact, in his deposition, Mr. Baldassarre stated that between his two site visits in August 2004, prior to the September 2004 school opening, not much of McDaniel's scope of work had advanced[27].

On page eight, CSF reports that:

> On September 29, 2004 EDiS notified McDaniel that it had decided to supplement McDaniel's workforce, and began to remove portions of the work from McDaniel's contract for completion by others.

Actually, on August 27, 2004, following many requests to complete the work in the penthouses and many promises by McDaniel that the work would be completed, their workforce was supplemented for work associated with the A, C, D, E and F Wing

[26] See page seven of CSF's report wherein they state ".. and in September 2004, CSF reported that based on the information at hand, McDaniel was capable of performing the remaining work and recommended that RLI consider McDaniel's request to provide it financial support for the remainder of the project."

[27] See Baldassarre deposition page 123, lines 8-14 – Q. Did you form an opinion from that site visit about the level of completion of McDaniel's scope of work at that time? A. My recollection is that not much had advanced since my first visit two weeks prior.

penthouses (Exhibit 3). Later, on September 29, 2004, following many requests to complete the heating system and many promises by McDaniel that the work would be completed, their workforce was supplemented for work associated with the boilers, fuel oil piping and related items to get the heating system operational (Exhibit 4). In both cases McDaniel's workforce was supplemented and no portions of work were removed from McDaniel's Contract. The notifications specifically stated that it was not a termination of their Contract and that they were to diligently pursue the completion of work in other areas of the building.

C. Discussion of Project Documentation

CSF begins their discussion of the Project documentation stating:

> Project documents indicate that in January 2004, the project was substantially behind schedule, and IRSD was concerned that the Project would not be complete in time for the school year. EDiS assured IRSD that a substantial portion of the building would be complete by the 2004 school year, but that the auditorium and the area known as B Wing would not be complete. (see [CSF] Exhibit 6).

We are confused by the paragraph as written by CSF. The exhibit that they cite is an April 2003 Monthly Project Status Report prepared by the CM and issued to IRSD. The April 2003 report indicates that the overall construction schedule is approximately ten weeks behind the original projected schedule although there is no mention of IRSD concerns regarding the building opening in time for the school year or that EDiS stated that the building would be complete with the exception of the auditorium and B Wing. Our review of the Project record shows that discussions regarding the auditorium and B Wing opening after the start of the 2004 school year did not begin until approximately May 2004. The schedule incorporated in the May 2004 Monthly Project Status Report reflects that the B Wing VO/AG and Shops are scheduled for completion on September 16, 2004 and that the B Wing Theater is scheduled for completion on October 15, 2004, each occurring after the September 7, 2004 school opening (Exhibit 76).

As reported by CSF, on April 22, 2003 (Exhibit 35) and May 8, 2003 (Exhibit 36) McDaniel provided only two letters regarding Project delay. Refer to Section V.F for a complete discussion of McDaniel's delay notification letters. With respect to Project delays, McDaniel was involved in discussions regarding changes and revisions to the Project Construction Schedules as reflected in numerous Construction Progress Meeting Minutes. The changes and revisions to the Project Construction Schedule were made to specifically overcome impacts such as those identified in McDaniel's April 22, 2003 and May 8, 2003 correspondence.

On page ten, CSF indicates that following correspondence from the CM in August 2003 notifying McDaniel that they were falling behind schedule, the next notice issued by the CM was not until March 2004. The March 2004 correspondence notified McDaniel that they were behind in specific areas of the building. During the period from August 2003 to March 2004 numerous notations regarding late ductwork shop drawings and late rough-ins in multiple areas of the Project are noted. For example, the November 11, 2003 Construction Progress Meeting Minutes No. 30 (Exhibit 44) states in item 30.2.2:

> McDaniel Plumbing & Heating: ductwork shop drawings for Areas 1A, E, F and B are late. These shop drawings are critical to the progress of work and coordination.

And in item 30.3.14:

> McDaniel is behind in Areas "A", "E" and "F".
> McDaniel needs to complete the rough-in in Area "C" as soon as possible.

The December 23, 2003 Construction Progress Meeting Minutes No. 33 (Exhibit 45) states in item 33.2.2:

> EDIS reiterated that ductwork shop drawings for Areas "E", "F" and "B" are late.

And in item 33.3.14:

> Insulation in Area "C" is nearly complete. NDK asked that McDaniel complete the chases in area 'C' so the drywall can be hung.
> Insulation in Area 'D' needs to start.

The January 20, 2004 Construction Progress Meeting Minutes No. 35 (Exhibit 48) states in item 35.2.2:

> EDIS reiterated that shop drawings for areas "E", "F" and "B" are late.
> McDaniel provided shop drawings for areas "C", "D", "F" and "E" on 1-2-04. Drawings for area "D" were sent to the Architect for review.
> McDaniel's stated that resubmitted shop drawings for areas "C" and "E" would be provided on 1/21/04. No status was given for shop drawings for Areas "F" and "B".

And in item 35.3.14:

> Lack of shop drawings is impacting coordination of work.
> McDaniel reported that work on the bases for the thermal storage unit has been delayed by his subcontractor. A new subcontractor has been hired.
> McDaniel previously reported that the pipe for the boiler room should be on site on 1/7/04. The pipe has not yet arrived.

Finally, the February 17, 2004 Construction Progress Meeting Minutes No. 37 (Exhibit 46) states in item 37.3.14:

> McDaniel previously reported that the work on the bases for the thermal storage unit will begin as soon as rebar arrives on site. This work has not commenced – LATE.
> The underground rough in for the pump house building was discussed. Materials for this work are not yet on site. EDIS requested that the work proceed as soon as possible so the foundations can be poured and the building can be set. There is a substantial amount of mechanical work required in that building.
> EDIS requested McDaniel to provide access panels for areas "C", "D" and "E" so the drywall contractor can proceed.

As can be seen from above, while specific letters were not being sent to McDaniel during the Winter of 2003/2004, the status of their work and the impacts that late completion was having on follow-on trades was being discussed in each construction progress meeting.

On page eleven, CSF states:

> On May 4, 2004 EDiS convened a meeting to discuss acceleration of McDaniel's work to complete the building by August 2004. EDiS prepared and presented a recovery schedule at the meeting. On May 17, 2004 EDiS again notified McDaniel that it was behind on the recovery schedule EDiS had prepared two weeks earlier.

A review of the memorandum prepared by the CM memorializing the May 4, 2004 meeting with McDaniel (Exhibit 59) indicates that the meeting was held to discuss McDaniel's inability to meet the Project schedule. More importantly, the letter states in part that:

> EDiS presented a recovery schedule, to Mr. McDaniel, outlining what it considers to be achievable milestones for completing the mechanical systems. The schedule was reviewed and Mr. McDaniel had no major objections. Mr. McDaniel would review it further and provide feedback on how he intends to meet this schedule.

As with much of the scheduling performed on the Project, McDaniel was involved and had the opportunity to provide feedback. In our review of the Project record, we cannot find a response from McDaniel to the schedule presented in the May 4, 2004 meeting or to any other schedule issued throughout the course of Project. As noted earlier, generally the contractors were requested to review schedules presented at the construction progress meeting and to provide comments or identify revisions necessary.

On page eleven, CSF discusses IRSD's supplementing of McDaniel's workforce in the penthouses in A, C, D, E and F Wings. CSF states that the CM issued a seven day notice letter regarding work in the penthouses to McDaniel on August 20, 2004 (Exhibit 77). An important aspect of the letter was omitted from the CSF narrative. The letter states in part:

> The [This] letter serves to <u>confirm our conversation</u> on 8/19/04 concerning the need to have all of the work in the penthouses completed. <u>You have committed to the following</u>: … (emphasis added)

McDaniel's work was supplemented in the A, C, D, E and F Wing penthouses because they failed to meet the commitment that they made on August 19, 2004 to complete the penthouses listed in the August 20, 2004 correspondence.

On page twelve, CSF discusses IRSD's supplementing of McDaniel's workforce for work associated with the heating system. CSF fails to mention the four letters that preceded the September 29, 2004 correspondence (Exhibit 4) from the CM notifying McDaniel of IRSD's intent to supplement their workforce. On August 11, 2004 (Exhibit 78), forty-nine calendar days prior to the September 29, 2004 notification, the CM sent the following to McDaniel:

> We have contacted the State of Delaware in regards to the requirements for boiler inspections. The state has informed us that CNA Insurance Company will be conducting the inspections. We also discovered that the domestic hot water heaters will also be inspected due to their BTU input / output. However, these inspections will not occur until you complete the following actions:
>
> - Complete ALL work at the boilers and hot water heaters.
> - Register with the State of Delaware – POC Jim Harlan 302-744-2735
> - Submit all start-up and test reports from Tate Engineering
>
> Without these inspections we will not be able to have the domestic water inspected by the Department of Health. This may prevent the owner from occupying the facility.
>
> **You need to take IMMEDIATE ACTION to get the work completed and have the boilers inspected.**

As was the case with the work in the penthouses, McDaniel had ample opportunity to perform the scope of work associated with the heating system prior to September 29, 2004 and failed to do so. According to the references in the September 29, 2004 correspondence to McDaniel (Exhibit 4), McDaniel was notified on four other occasions prior to September 29, 2004 that the work on the boilers required their immediate attention.

It is important to note that other trade contractors were able to finish their work in accordance with construction progress schedules issued during the course of the project. We cite specifically the electrical contractor because of the similarities in the work process. For example, both mechanical and electrical trades begin at approximately the same time with underground rough-ins, the above ground rough-ins are both dependent on the progress of the structure, both have aspects of work that are contingent upon building enclosure, and both finish at approximately the same time with final commissioning of building systems. Permanent electrical power is a milestone that allows for the start-up of major mechanical and electrical equipment and the two activities generally occur in the same timeframe. On this Project, permanent electrical power was turned on December 20, 2003[28] while McDaniel's air handling units were not ready to be started up until early July 2004, six months later.

D. Surety Bond and Termination

On or about August 28, 2002, RLI issued Performance and Payment Bonds, each in the amount of the McDaniel Contract with IRSD, $4,335,500.00 Exhibit 23). On page fifteen, CSF states that:

> On September 8, 2004, IRSD notified McDaniel that it was considering a [sic] declaring a default, and requested a meeting. A meeting was convened on September 23, 2004 in the offices of Tighe, Cottrell, and Logan, P.C. (counsel to EDiS) – McDaniel was not at this meeting, as required by article 3.1 of the Bond.

We are unaware of the reason that McDaniel was not in attendance at the September 23, 2004 meeting although our understanding of Article 3.1 of the Performance Bond indicates that IRSD fulfilled their obligations under the provisions of the Bond. Article 3.1 states in part:

[28] See Construction Progress Meeting Minutes No. 33 dated December 23, 2003, item 33.2.1 – "Permanent power was turned on as of 12/20/03."

> The Owner has notified the Contractor and the Surety at its address described in Paragraph 10 below that the Owner is considering declaring a Contractor Default and has requested and attempted to arrange a conference with the Contractor and the Surety to be held not later than fifteen days after receipt of such notice … (emphasis added)

Article 3.1 does not require that a conference take place, only that the Owner request and attempt to arrange such a conference. In that the conference actually took place on September 23, 2004, IRSD fulfilled their obligations pursuant to the Performance Bond and is not responsible for McDaniel's failure to be present at the conference.

E. CSF Findings

On page seventeen, CSF states:

> The Owner prepared a project accounting showing that it had paid to or on behalf of McDaniel the sum of $4,041,863 (See [CSF] Exhibit 15). This amount paid by IRSD included payments for work that had not yet been completed, and for work that had been deemed unacceptable by EDiS, BMG and A&S since January 2004 (first notice of deficient work).
>
> IRSD paid these amounts in advance of the correction or completion of the work upon the recommendation of its consultants – EDiS and BMG – in an effort to free up monies for McDaniel to keep the project moving.

CSF states that IRSD paid "these amounts" in advance of the correction or completion of the work upon the recommendation of its consultants in an effort to free up monies for McDaniel to keep the Project moving. We are uncertain whether "these amounts" refer to a specific dollar figure or whether it is simply a global statement for monies paid for work that had not yet been completed and for work that had been deemed unacceptable. In either case, IRSD paid the amounts certified by the CM and the Architect as required under the terms of the Contract. IRSD did not pay the amounts certified by the CM and the Architect to "free up monies for McDaniel to keep the Project moving." As stated earlier, the General Conditions for the Contract for Construction (Exhibit 14) are clear, Article 9.6.1:

> After the Construction Manager and Architect have issued a Project Certificate for Payment, the Owner shall make payment in the manner and within the time provided in the Contract Documents, and shall so notify the Construction Manager and Architect.

And Article 9.7.1 in part:

> If, through no fault of the Contractor, … or 2) the Owner does not pay the Contractor within seven days after the date established in the Contract Documents the amount certified by the Construction Manager and Architect or awarded by arbitration, then the Contractor may, upon seven additional days' written notice to the Owner, Construction Manager and Architect, stop the Work until payment of the amount owing has been received. The Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shut-down, delay and start-up, which shall be accomplished as provided in Article 7.

Therefore, in accordance with the Contract terms, IRSD was obligated to pay McDaniel the amounts certified by the CM and Architect.

CSF then states on page seventeen that:

> A detailed analysis of the McDaniel payment applications indicated that [a] significant number of items on the schedule of values had been paid to McDaniel as 100% complete. However, there was substantial remaining work to be performed in Area B, and an extensive punchlist of deficient and remaining work in the five other areas of the building. …
>
> CSF worked with McDaniel to develop a cost of the remaining work for labor, materials, and equipment needed for completion for Area B and for correction of deficient work. McDaniel estimated that the completion of the project would cost about $428,000. McDaniel also reported that it had accounts payable for materials, equipment and subcontractors that totaled approximately $596,000.

The statements made by CSF in these two paragraphs are at the heart of the dispute between the parties: The payment made to McDaniel for items on the schedule of values at 100% complete when the work was either not complete or was deficient is a result of the fact that McDaniel was not paying subcontractors or suppliers as required by the Contract.

As early as June 13, 2003 the CM began receiving information regarding McDaniel's failure to pay its financial obligations on the Project (Exhibit 79). In their correspondence to McDaniel, the CM reminded them that it was their responsibility to keep all of their payments current per the Contract agreement. The General Conditions of the Contract for Construction (Exhibit 14) states in Article 9.3.3:

> … The Contractor further warrants that upon submittal of an Application for Payment all Work for which Certificates of Payment have been previously issued and payments received from the Owner shall, to the best of the Contractor's knowledge, information and belief, be free and clear of liens, claims, security interests or encumbrances in favor of the Contractor, Subcontractors, material suppliers, or other persons or entities making a claim by reason of having provided labor, materials and equipment relating to the Work.

In addition, each application for payment contained the following statement that was signed by a responsible individual at McDaniel and notarized (Exhibit 80):

> The undersigned Contractor certifies that to the best of the Contractor's knowledge, information and belief the Work covered by this Application for Payment has been completed in accordance with the Contract Documents, that all amounts have been paid by the Contractor for Work for which previous Certificates for Payment were issued and payments received from the Owner, and that current payment shown herein is due.

Under the terms of the Contract, as outlined above, McDaniel should not have had $596,000.00 in accounts payable for materials, equipment and subcontractors as reported by CSF. Mr. McDaniel stated in his deposition that there was no effort on the part of McDaniel Plumbing & Heating to pay subcontractors and suppliers on the Project with funds received from IRSD[29]. The failure of McDaniel to pay subcontractors, material suppliers and for equipment on the Project from the funds received from IRSD

[29] See McDaniel deposition, page 268, line 22 to page 269, line 15 – Q: On the Sussex Central project, did you use the funds that you received from the owner on that project to pay the costs for your suppliers and subcontractors for that project? MS. HALATYN: Objection. You could answer. A: In the transcript I stated last time the funds were commingled. Q: Tell me what you mean by that. A: We got the payments from the jobs and we pay the bills and hopefully a profit is made and there is some money left over. Q: So what you are saying is, there was no effort on the part of your company to see to it that the funds that were received for the Sussex Central project went to pay the Sussex Central costs? A: No.

is a clear violation of the Contract and led to the need to issue payments to the subcontractors and suppliers by Application and Certificate for Payment Nos. 22, 23R and 24.

Our review of the Project record indicates that following Application and Certificate for Payment No. 21 for work completed through June 25, 2004 (Exhibit 21), the balance to complete the Project was $698,526.60. The balance to complete was comprised of $506,319.00 balance to finish and $192,207.60 retainage[30]. In his deposition, Mr. McDaniel stated that the balance to finish, including retainage, was sufficient to complete the work at the time Application and Certificate for Payment No. 21 was prepared[31]. Mr. McDaniel confirmed in his deposition what the CM and Engineer both believed and certified on or about July 15, 2004, that the balance to complete McDaniel's Contract work and correct any known deficiencies at Application and Certificate for Payment No. 21 was sufficient.

The three applications for payment following Application and Certificate for Payment No. 21 were made to either obtain equipment that would not be delivered to the Project by suppliers without advance payment, to pay subcontractors and/or suppliers for past work performed or in one case to advance payroll to McDaniel. None of the three applications for payment were made to actually reflect work in place between June 26, 2004, the date following Application and Certificate for Payment No. 21, and October 11, 2004, the date that McDaniel's Contract was terminated. The three applications for payment that follow the June 25, 2004 Application and Certificate for Payment No. 21 are responsible for causing the paid to date values to be skewed, and

[30] Note that our calculations are based on re-calculating the balance to finish and the retainage following adjustments made to the line items for ductwork and insulation.
[31] See McDaniel deposition, page 258, line 22 to page 259, line 7 – Q: At the time this application was prepared and signed by you, was the balance to finish including retainage sufficient, in your judgment, to complete the work? MS. HALATYN: Objection. Do you mean now in retrospect or at the time? Q: At the time, yes. Now obviously no. A: We covered that. At the time, yes, now, obviously no.

make the completion percentages appear to be higher than they actually were. The last actual evaluation of the percent complete status of the Project was with Application and Certificate for Payment No. 21. The remaining three payment applications were prepared to pay vendors and make joint check payments and to pay McDaniel for their payroll. Each of the amounts paid were for work directly associated with the Sussex Central High School Project and in the case of the joint checks, were bonded obligations of RLI. The determination of which schedule of value line items the monies were taken from was an internal computation based primarily on which line items had remaining value. In essence, the selection of line items was merely an accounting function and had nothing to do with the completion status of particular scopes of work. See Exhibit 96 for a comparison of McDaniel Application and Certificate for Payment Nos. 21 through 24.

Application and Certificate of Payment No. 22 was prepared specifically to pay for the water treatment system (Exhibit 81). On June 25, 2004 the CM requested the status of several key pieces of equipment (Exhibit 82). On July 16, 2004 (Exhibit 83), the CM followed up to McDaniel stating:

> On 25 June 2004 we sent you a letter regarding the status of key pieces of equipment. On 30 June 2004 you sent us a letter confirming that the water treatment system would be shipped on 7 July 2004 and would arrive on 12 July 2004. At our progress meeting on 13 July 2004 you confirmed that this equipment had been shipped. As of yesterday the water treatment system has not left the factory.
>
> Within the last few days we have had contact with some of your suppliers and subcontractors, to include Advanced Power Controls and U.S. Filter. These companies have advised us that they have not been paid for materials provided, or work performed. They also told us that they would not work if they were not paid.
>
> This directly impacts our ability to have a fire marshal's inspection, health department inspection and receive a certificate of occupancy. We have advised you that you must keep your accounts with your subcontractors and suppliers current. …

U.S. Filter was the company supplying the water treatment system that McDaniel had indicated was shipped in early July 2004. In his deposition, Mr. McDaniel indicated that the company providing the water treatment system would not provide the equipment without payment in advance, contrary to an earlier agreement to provide McDaniel credit[32].

Confronted with the prospect of not receiving the water treatment system, and therefore not being able to obtain the health department inspection and certificate of occupancy, McDaniel, the CM and the Architect all certified Application and Certificate for Payment No. 22 on July 23, 2004, July 26, 2004 and July 27, 2004, respectively. As noted by Mr. McDaniel in his deposition, McDaniel immediately issued a check to U.S. Filter and the water treatment system was delivered a short time later. The fact that Application and Certificate for Payment No. 22 reflected the water treatment line item as 100% was again, an internal computation necessary to generate payment so that the water treatment system could be delivered to the Project.

On July 27, 2004, RLI demanded that the CM release no further funds arising from IRSD's Contract with McDaniel. RLI's correspondence was dated the same date that the CM had certified Application and Certificate for Payment No. 22 for the water treatment system. The Contract balance to complete at the time of RLI's July 27, 2004 demand, just following Application and Certificate for Payment No. 22 was

[32] See McDaniel deposition, page 124, line 19 to page 125, line 9 – Q: Was a joint check written to McDaniel and the water treatment – A: No. It was supposed to go to the water treatment people. It was supposed to go to the water treatment people, but it didn't. It went to me. And that same day I wrote a check to the water treatment people. They were demanding all their money up front despite our other agreement. Q: What was the agreement? A: That they would give us credit; we would pay so much in advance. Q: So it's your recollection that McDaniel was paid and then turned around and wrote a check to the water treatment company? A: Correct.

$607,231.60[33]. The balance to complete was comprised of $410,219.00 balance to finish and $197,012.60 retainage.

Application and Certificate for Payment No. 23R was prepared to pay seven specific vendors and/or subcontractors and to advance payroll to McDaniel (Exhibit 84). On August 17, 2007, counsel for RLI notified the CM through their counsel that RLI agreed with the issuance of joint checks at that point and that they authorized their release (Exhibit 75). In his deposition, Mr. McDaniel stated that he participated in a meeting with the CM regarding the amounts of the joint checks paid in Application and Certificate for Payment No. 23R[34]. The August 11, 2004 cover letter from the CM to the Architect identifies the seven vendors that were paid a total of $124,308.20 in joint checks approved by RLI. The letter identifies the seven vendors and the amounts paid as follows:

NECO Equipment Co.	$15,000.00
York International	$ 3,733.20
William H. Brady Co.	$30,575.00
Elite Air Systems, Inc.	$10,000.00
Penco Corporation	$30,000.00
Insulation Materials Corp.	$10,000.00
Advanced Power Control	$25,000.00
	$124,308.20

In addition to the joint checks, the CM approved $78,315.40 to be paid directly to McDaniel. The payment to McDaniel had been discussed with RLI counsel on or about August 5, 2004. The CM forwarded information to RLI counsel regarding McDaniel's weekly payroll and the joint checks (Exhibit 85). The funding of McDaniel's payroll for approximately three to four weeks was necessary to complete the mechanical scope of

[33] Note that the payment application was still not properly revised from the line item deduction made in the Application and Certificate for Payment No. 21.

[34] See McDaniel deposition, page 152, lines 3-18, Q: Did you discuss the preparation of this payment application with anyone at EDiS before you submitted it? A: There were meetings with EDiS there, in their office. There were [sic] a lot of discussions about it. Q: Okay. A: Which particular one, which particular day I don't remember. Q: Do you ever remember anyone from EDiS telling you what to bill for the project? A: Like when we had to bill for the water treatment system, I remember that. Q: Other than that? A: There was discussion about the joint checks. We reviewed those amounts. That's how we got to these amounts.

work sufficiently to allow the school to open on September 7, 2004. As was the case with Application and Certificate for Payment No. 22, the percentage complete of individual line items reflected an internal computation necessary to generate payment to the subcontractors and suppliers and for McDaniel's payroll. The following changes to specific line items in the payment application were made on Application and Certificate for Payment No. 23R:

Domestic A/G	98.33%	to	100.00%
Chilled Water Piping	96.25%	to	98.75%
Fixtures	86.21%	to	96.55%
HVAC Equipment	95.45%	to	100.00%
GRD's	73.91%	to	86.96%
Exhaust Fan	95.65%	to	100.00%
Water Heaters	96.67%	to	100.00%
Pumps-Heating/Cooling	98.15%	to	100.00%
Air Compressor & Filters	0.00%	to	50.00%
Kitchen	80.00%	to	100.00%
Man Hour Allowance	0.00%	to	27.59%
Ductwork	86.68%	to	96.91%
Welded Duct	0.00%	to	100.00%
Insulation	92.15%	to	95.92%
Spiral Duct	71.79%	to	100.00%
ATC	86.88%	to	94.69%
As-Built Drawings	0.00%	to	50.00%
Alternate #2 – Storage Area	44.44%	to	100.00%
Alternate #3 – Classrooms	88.89%	to	100.00%
CO#2 Add Instaheater	0.00%	to	100.00%
CO#4 Wellness Center	42.03%	to	100.00%

McDaniel, the CM and the Architect certified Application and Certificate for Payment No. 23R on or about August 11, 2004. Without the joint check payments and payroll advance approved by RLI and made by IRSD on this application; labor, materials and equipment would not have been available to allow the school to open on September 7,

2004. The joint checks were bonded obligations of RLI and Mr. McDaniel testified in his deposition that the payroll advance was in fact used to fund payroll for the Project[35].

Application and Certificate of Payment No. 24 was prepared specifically to pay for the thermal storage units (Exhibit 86). On June 24, 2004, McDaniel was corresponding with Baltimore Aircoil Company discussing notification that they had received stating advance payment would be required for the thermal storage units (Exhibit 87). On June 25, 2004 the CM requested the status of several key pieces of equipment (Exhibit 82). On August 26, 2004, with the knowledge that the thermal storage units (ice storage system) would not be in place at the September 7, 2004 opening of the school, the Engineer provided an explanation of the mechanical system and the impact of the thermal storage units not being installed at the time occupancy was expected to be granted (Exhibit 88). The engineer stated that:

> In response to the energy usage and utility costs, both will be higher as a result of the ice storage system not being installed. As designed the chiller runs at night to build ice which is melted during the day to cool the building. The ice storage system is designed as a partial storage system which means the chiller would run during the day to supplement the cooling but the system would look to utilize the stored ice first. Without the ice storage system in place the chiller will primarily run during the day instead of the night. The higher energy costs that will be experienced are a result of three things. First, the chiller runs more efficiently and with a higher capacity at night due to lower ambient temperatures at night as compared to the day. Second, the utility charges at night are less than during the day. Third, utility rates are based each month on the peak demand charge. With the chiller running 100% during the day at the same time the rest of the equipment is running in the school, this peak demand charge will be higher. It is difficult to anticipate what the premium in utility costs will be as a result of the ice storage system not being in place, but the utility costs will be higher.

In order to be able to complete the mechanical system as designed and to mitigate additional energy costs that were going to be experienced, Application and Certificate for Payment No. 24 was prepared. In much the same fashion as was done for

[35] See McDaniel deposition, page 157, lines 18-23, Q: When you said you used the money, the $78,000 to fund payroll – A: Correct. Q: --was the payroll funded for the Sussex Central project? A: Yes.

Application and Certificate for Payment No. 23R, the percentage complete of individual line items reflected an internal computation necessary to generate payment to the thermal storage unit equipment vendor. The following changes to specific line items in the payment application were made on Application and Certificate for Payment No. 24:

Chilled Water Piping	98.75%	to	100.00%
Fixtures	96.55%	to	100.00%
GRD's	86.96%	to	100.00%
Water Storage Tank	93.75%	to	100.00%
Dust Collectors	75.00%	to	100.00%
Engine & Welding Duct	0.00%	to	100.00%
Boilers	97.89%	to	100.00%
Air Compressor & Filters	50.00%	to	100.00%
Glycol	0.00%	to	100.00%
Ductwork	96.91%	to	100.00%
Insulation	95.92%	to	100.00%
Testing, Adjusting & Balancing	0.00%	to	25.51%

McDaniel, the CM and the Architect certified Application and Certificate for Payment No. 24 on or about September 13, 2004. Without the joint check payment to Baltimore Aircoil the thermal storage units would not have been delivered to the Project. CSF was well aware that the joint check payment was being sent to Baltimore Aircoil. In their September 9, 2004 letter to the CM (Exhibit 110), CSF stated:

> We understand that there is a payment pending and that a portion will be paid as a joint check to Baltimore Air Coil, and the remainder will be sent to the project account. Please confirm the amounts and the dates of the transactions.

CSF indicated that it was aware of the joint check payment to Baltimore Aircoil and that the remaining $10,400.00 balance of Application and Certification for Payment No. 24 should be forwarded to their account.

CSF discusses the ductwork and chilled water piping line items in Application and Certificate for Payment No. 24 reflecting 100% when both line items had significant work remaining in the B Wing of the Project. In addition, they noted that the test and balancing line item reflected 25%. As noted above, following Application and Certificate for Payment No. 21, the line item percentages are simply an accounting function to provide payment, from line items that have remaining funds in them, to subcontractors and/or vendors for labor, material and equipment required to complete this Project. In our opinion, the most accurate measure of what the Project status was with respect to work in place is with Application and Certificate for Payment No. 21, the payment application just prior to the issuance of joint checks. The Project balance to complete following Application and Certificate for Payment No. 21 was $698,536.60.

According to the deposition testimony of Mr. McDaniel regarding the payment for the water treatment system and the payroll advance as well as the joint checks paid to subcontractors and suppliers, all of the payments resulting from Application and Certificate for Payment Nos. 22, 23R and 24 were payments for obligations on the Sussex Central High School Project.

Starting on page twenty of their report, CSF discusses the work performed by Zimmer to correct deficiencies and complete Contract work and by Tri-State to complete Contract work in B Wing. On page twenty-three, CSF concludes by stating that IRSD reported that it paid approximately $1,590,000.00 to complete work that McDaniel estimated would cost about $429,000.00. CSF compares the costs incurred by Zimmer and Tri-State to McDaniel's original schedule of values. CSF also compares the costs incurred by Zimmer and Tri-State to the amount paid and the percentage complete of certain line items in the payment applications at the time McDaniel was terminated. We will comment briefly on the information presented but in our opinion, the comparisons are misleading. The costs incurred by Zimmer and Tri-State included costs that would

not have been incorporated in McDaniel's schedule of values: costs such as mobilization for Zimmer and Tri-State whereas McDaniel was already mobilized on the Project and more significantly, costs incurred involving the demolition, removal, disposal, re-fabrication and re-installation of a significant amount of ductwork, piping and insulation in the A, C, D, E and F Wing penthouses. As discussed in detail previously, comparisons to the amount paid to McDaniel and the percentage complete on the continuation sheet line items are also misleading because of the number of internal accounting changes required to make joint check payments and advance equipment and payroll payments in Application and Certificate of Payment Nos. 22, 23R and 24.

CSF states that in September 2004 Zimmer was authorized to perform items of work described by the Engineer as "emergency punchlist" items for a total of $120,000.00. CSF also states that it appeared that Zimmer was able to define their own scope of work rather than work from a scope defined by the Engineer. Following our review of the Project record we dispute both these statements by CSF.

On September 8, 2004, Zimmer was authorized by IRSD to proceed with emergency work associated with penthouses A301, C301, D301, E301, F301 and F302 (Exhibit 7). The authorization from IRSD did not contain any discussion of the cost of the work, rather IRSD stated:

> It is the Indian River School District's intention to issue you a purchase order for this work.

The September 8, 2004 authorization incorporated a list of emergency items prepared by the Engineer. In response to IRSD's authorization, Zimmer responded on September 14, 2004 (Exhibit 89) with the following:

> We are in receipt of your letter dated September 8, 2004. You have directed us to proceed with certain work in Penthouses A, C, D, E, and F. We are prepared to proceed with this work immediately. In reviewing the

> attached memo from Allen and Shariff dated September 9, 2004, we have determined that emergency items number 1, 2, 3, 4, 5, 6, 7, 8, 9, and 14 deals specifically with the penthouses. It is conspicuously noted that this list does not include the following: [sic]
>
> - Correction and/or completion of the hot water heating piping within the penthouses
> - Correction of chilled water piping
> - Insulation of ductwork and piping
> - Completion of temperature control work
> - Correction of ductwork to alleviate access and service constraints
> - Provide and install missing fire dampers at penthouse floor penetrations
> - Numerous other issues to produce a working and appropriate mechanical system as outlined in the Allen and Shariff memo dated August 31, 2004.
>
> Though we can proceed with the emergency items noted above, their completion at this time will likely result in most of this work having to be redone at a later date to properly complete these systems.

On September 23, 2004, the Engineer wrote a memorandum documenting September 21 and 22, 2004 meetings involving the CM, the Engineer, the Architect, IRSD and Zimmer to discuss further issues identified by Zimmer when they started to perform the emergency list (Exhibit 90). The memorandum stated in part:

> Based on information provided by Zimmer, (since verified by Allen & Shariff) much of the installed ductwork in the penthouse is not the correct size. Our drawings indicate clear inside dimensions; ductwork is installed as outside dimensions, thereby not accounting for the ductliner. Direction was provided to Zimmer Mechanical to replace all incorrect ductwork as part of the emergency list. This work is directly associated with the correcting of fire dampers, the unsafe floor conditions and installing the air flow monitoring stations. Zimmer was further directed to coordinate and relocate all equipment that is effected [sic] by this ductwork installation (specifically the return fans and the air handlers) as required to meet the specifications. This includes allowing for: coil pulls, proper maintenance access, ability to open all access doors, SMACNA approved duct transitions, and maximizing headroom and clearance. Failure to perform this coordination at this time would result in redoing the work later, thereby costing more money and time before the system meets the specification. … Zimmer Mechanical was given direction to proceed with correcting all heating deficiencies in the penthouses.

Following the September 21, 2004 meeting, Zimmer's scope of work in the penthouses had significantly increased over the September 8, 2004 IRSD authorization to proceed in the penthouses. Contrary to the assertion by CSF that Zimmer was able to define their own scope of work, increases in Zimmer's scope of work occurred following meetings with multiple parties and specific direction given at those meetings.

On September 29, 2004, Zimmer was authorized by the CM to proceed with completing the boilers, fuel oil piping and related items necessary to get the heating system operational (Exhibit 8). Several days later, on October 1, 2004, the CM provided a list of items that needed to be completed in order for the heating system to be fully functional (Exhibit 91).

On December 23, 2004, Zimmer was authorized to proceed with the installation of ductwork above the auditorium necessary for follow-on work to proceed (Exhibit 9). On January 5, 2005, Zimmer was authorized to proceed with both the performance of punchlist items identified by the Architect and Engineer in the A, C, D, E and F Wings of the building and with the water treatment system and glycol feed system (Exhibit 10). The notice to proceed for the punchlist work indicated that the cost of the work would not exceed $160,000.00. The notice to proceed for the water treatment system indicated that the cost of the work would not exceed $34,200.00

Zimmer was issued five specific authorizations to perform specific work on the Project and as the work evolved they were provided with additional direction. In his deposition, Mr. Zimmer provided an overview of how the scope of their work evolved[36]:

> Q: When you say "to this magnitude, no," what magnitude –
> A: Well, in terms of the ultimate scope of work and the dollar value. But, again, appreciate somehow, if you can, that so much of this evolved over a period of time. We start off primarily with penthouses, trying to get them up, run, move some air, hopefully get some heat and air

[36] See Zimmer deposition, page 105, line 5 to page 107, line 19.

> conditioning. And then more and more things came into play. Now, whether or not it was because EDiS felt McDaniel was going to proceed with other things outside of that that we were doing or what, I don't know at this point; I had no way of knowing. But EDiS kept coming to us more and more and more for more and more and more things that needed to be done to make the school whole. I mean, as it turned out when we started the penthouses that was all well and good except the mechanical room on the other side of the building which had to serve the penthouses wasn't running, it wasn't done. They didn't have chilled water and they didn't have heating water. They didn't have, the fuel systems were incomplete.
> Q: Was that particular condition something you observed on your initial inspection of the property or did you not learn that until sometime later?
> A: Well, some of those aspects were tough to tell just by a walk-through. I mean, you could see when insulation is not on a pipe; you can see that. There are some other visual aspects you can see. Was the temperature control 100% done, run, hooked up commissioned? You can't see that, okay?
> Q: Okay.
> A: And as it turned out it wasn't. What happened, too as we got into this and found out, a lot of subs and vendors that had been involved with McDaniel abandoned the job, they hadn't gotten paid for a year or whatever it was, or had gotten very bad information and they just, they stopped coming to the job site. So the whole thing just crumbled. And we had to figure all this out, figure out who they were. That's why you'll see the lists of mine in there trying to determine the players that had been involved, trying to find out where they were, what we could do to help get them back on board. The domestic water system was another one of those that we wound up getting involved in that was not done. Nobody realized it wasn't done, but it wasn't done. And it turned out there were aspects of it that were incorrect as well. So this thing just, almost daily just continued to grow and grow and evolve and evolve.

As shown above, Zimmer performed significantly more work than just the work listed on the "emergency punchlist." In a June 30, 2005 letter to the CM (Exhibit 109), Zimmer stated:

> You should recall that when we were asked to become involved, it was with the notion of completing the penthouses in accordance with the punch list produced by Allen & Shariff. Subsequently, it was determined that there were vast deficiencies within the mechanical work already accomplished, not the least of which was the fact that all ductwork was undersized. This eventually led to the decision of Indian River School District and EDiS to completely redo piping, ductwork, etc. within the penthouses. Our *"guestimate"* did not anticipate all this.
>
> Further, numerous deficiencies not readily recognized by Allen & Shariff, ourselves or others were undercover as work proceeded. We were

> continuously directed by EDiS to proceed with the necessary rectifications. A good example of this would be the fire stopping in-fill of the floors in the penthouse ductwork penetrations. The end result was to in-fill these with steel plate that had to be cut and shaped in the field to fit each duct configuration.
>
> It should be noted that at no time did Joseph M. Zimmer, Inc. take upon itself the decision to do anything in the pursuit of the completion of this project. All work was done with the knowledge of some combination of Indian River School District and EDiS. We believe that the work accomplished by us was done in a complete and professional manner to the benefit of Indian River School District. We trust that this explanation will provide the background for the costs to accomplish same.

In addition, as indicated by Mr. Zimmer in his deposition, the work required to complete the mechanical systems continued to evolve on a daily basis. Clearly, from the documents listed above, Zimmer was not defining their own scope of work but rather was identifying additional areas of incomplete and/or deficient work and being authorized by IRSD to proceed. With respect to the comparison of Zimmer billings to the McDaniel work items presented by CSF on page twenty-one, as stated several times earlier, we do not believe that it is possible to make a valid comparison because of the situation described earlier with Application and Certificate for Payment Nos. 22, 23R and 24.

The most cost effective method of completing the remaining B Wing scope of work was to re-bid. Tri-State was the low bidder and on January 27, 2005 they were awarded Contract SC-D-25 for the remaining B Wing Mechanical, Plumbing and ATC scope of work in the amount of $603,200.00 (Exhibit 11). CSF compared the Tri-State schedule of values to the McDaniel work items listed in Application and Certificate for Payment No. 24. As is the case with the comparison with Zimmer's billings, we do not believe that a meaningful comparison can be made following the payment of the joint checks in Application and Certificate for Payment Nos. 22, 23R and 24. In addition, the cost for completing the B Wing mechanical work was higher because McDaniel did not complete the work. The remaining work was competitively bid and the low bidder was

selected. It is typical for contractors to charge a premium when taking over work that is partially completed. The difference can also be attributed to the additional mobilization costs, labor and materials escalation over the two years since the Project was originally bid, bid premiums because work is more difficult in an occupied building or bid premiums because the scale of the Project – only one wing – is much smaller than what McDaniel bid in 2004.

F. Responsibilities

CSF states that the Architect certified the completeness and correctness of the work performed by McDaniel and did not notify McDaniel of the unacceptable work until May 5, 2004. Our review of the Project record indicates that the Engineer's above ceiling inspection in C Wing was forwarded to McDaniel on January 20, 2004 (Exhibit 93). That inspection report contained a number of deficient items requiring correction by McDaniel.

The Construction Progress Meeting Minutes also provide notification to McDaniel of deficient work that required correction. There is no evidence that the Architect failed to take into consideration what they knew about the completeness and correctness of the work when certifying the payment applications. In addition, CSF has not provided any evaluation or evidence that the Architect's certification was inconsistent with what the Architect knew at the time.

With regard to the Architect's obligations for inspections and certifications, we also reviewed the Contract. The General Conditions of the Contract for Construction (Exhibit 14), Article 4.6.5 states in part:

> However, the Architect will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work.

And Article 9.4.3 states:

> The issuance of a separate Certificate for Payment or a Project Certificate for Payment will constitute representations made separately by the Construction Manager and Architect to the Owner, based on their individual observations at the site and the data comprising the Application for Payment submitted by the Contractor, that the Work has progressed to the point indicated and that, to the best of the Construction Manager's and Architect's knowledge, information and belief, quality of the Work is in accordance with the Contract Documents. The foregoing representations are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to minor deviations from the Contract Documents correctable prior to completion and to specific qualifications expressed by the Construction Manager or Architect. The issuance of a separate Certificate for Payment or Project Certificate for Payment will further constitute a representation that the Contractor is entitled to payment in the amount certified. However, the issuance of a separate Certificate for Payment or a Project Certificate for Payment will not be a representation that the Construction Manager or Architect has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work, (2) reviewed the Contractor's construction means, methods, techniques, sequences or procedures, (3) reviewed copies of requisitions received from Subcontractors and material suppliers and other data requested by the Owner to substantiate the Contractor's right to payment or (4) made examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum. (emphasis added)

The Certificate for Payment signed by the Architect with each Application and Certificate for Payment states (Exhibit 21):

> In accordance with the Contract Documents, based on on-site observations and the data comprising this application, the Construction Manager and Architect certify to the Owner that to the best of their knowledge, information and belief the Work has progressed as indicated, the quality of the Work is in accordance with the Contract Documents, and the Contractor is entitled to payment of the AMOUNT CERTIFIED.

As required by the Contract, the Architect certified that, to the best of their knowledge, information and belief, McDaniel was entitled to the amount indicated on the payment applications. The Contract is clear in stating that the certifications of the Architect are

subject to an evaluation of the work for conformance with the Contract Documents upon Substantial Completion and to the results of subsequent tests and inspections.

Regarding the CM's obligations when making certifications, we also reviewed the Contract. B801/CMa – Standard Form of Agreement Between Owner and Construction Manager (Exhibit 94), Article 2.3.11.4 states:

> The issuance of a Certificate for Payment shall not be a representation that the Construction Manager has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work, (2) reviewed construction means, methods, techniques, sequences for the Contractor's own Work, or procedures, (3) reviewed copies of requisitions received from Subcontractors and material suppliers and other data requested by the Owner to substantiate the Contractor's right to payment or (4) ascertained how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

And Article 2.3.11.3 states in part:

> The Construction Manager's certification for payment shall constitute a representation to the Owner, based on the Construction Manager's determination at the site as provided in Subparagraph 2.3.13 and on the data comprising the Contractor's Application for Payment, that, to the best of the Construction Manager's knowledge, information and belief, the Work has progressed to the point indicated and the quality of the Work is in accordance with the Contract Documents. The foregoing representations are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to the results of subsequent tests and inspections, to minor deviations from the Contract Documents correctable prior to completion and to specific qualifications expressed by the Construction Manager.

The Certificate for Payment signed by the CM with each Application and Certificate for Payment states:

> In accordance with the Contract Documents, based on on-site observations and the data comprising this application, the Construction Manager and Architect certify to the Owner that to the best of their knowledge, information and belief the Work has progressed as indicated, the quality of the Work is in accordance with the Contract Documents, and the Contractor is entitled to payment of the AMOUNT CERTIFIED.

As required by the Contract, the CM certified that, to the best of their knowledge, information and belief, McDaniel was entitled to the amount indicated on the payment application. The Contract is clear in stating that the certifications of the CM are subject to an evaluation of the work for conformance with the Contract Documents upon Substantial Completion and to the results of subsequent tests and inspections. (See Article 9.4.3 of the General Conditions cited on page 98.)

CSF states that both the CM and the Architect were responsible for reviewing and certifying the completeness and quality of McDaniel's work. In our opinion, both the CM and Architect exercised their judgment and discretion pursuant to the Contract by certifying that McDaniel's work had progressed as indicated on the payment applications, to the best of their knowledge, information and belief. Application and Certificate for Payment Nos. 22, 23R and 24 were certified to pay for equipment, for bonded obligations to unpaid vendors and to fund payroll for this Project, all of which were necessary to open the school on time or mitigate additional costs.

There is no evidence that the CM failed to take into consideration what they knew about the completeness and correctness of the work when certifying the payment applications. In addition, CSF has not provided any evaluation or evidence that the CM's certification was inconsistent with what the CM knew at the time.

G. Owner's Failure to Perform

CSF states on page twenty-six, that the Owner had a responsibility to RLI to protect RLI's interest in the contract funds, the security upon which RLI relied when it issued the Bonds. We have reviewed the Bonds issued by RLI and can find no clause that indicates any such responsibility that IRSD had to RLI. The Performance Bond (Exhibit 23) states in Article 12.4:

> Owner Default: Failure of the Owner, which has neither been remedied nor waived, to pay the Contractor as required by the Construction Contract or to perform and complete or comply with the other terms thereof.

CSF continues, stating that the Owner's payment for work that its consultants knew was incorrect or not performed can be construed as a default of the Owner. Our review of the Project record shows that IRSD did exactly as the Contract required them to do, that was to make payments to McDaniel that were certified by the CM and Architect. CSF then states that as of April 30, 2004 the Owner had approved and paid for about eighty-one percent of McDaniel's Contract. This is incorrect, the Owner approved nothing. As noted earlier, the General Conditions for the Contract for Construction (Exhibit 14) are clear, Article 9.6.1 states:

> After the Construction Manager and Architect have issued a Project Certificate for Payment, the Owner shall make payment in the manner and within the time provided in the Contract Documents, and shall so notify the Construction Manager and Architect.

The Contract provides the Owner with but one option: pay the amount certified by the CM and Architect to the Contractor. The Contract does not provide the Owner with the right to approve payments as indicated by CSF.

H. Calculation of Improper Payment by the Owner

CSF states on page twenty-seven, that:

> Under Article 9.5 (see Figure 11.1) the contract terms require that EDiS and BMG retain funds equivalent to the value of the deficient or incomplete work to protect the Owner, until such time that the deficiency is remedied or the work is complete. (emphasis added)

Our review of Article 9.5 reveals a different understanding. The General Conditions for the Contract for Construction (Exhibit 14), Article 9.5.1 states:

> The Construction Manager or Architect may decide not to certify payment and may withhold a Certificate for Payment in whole or in part,

> to the extent reasonably necessary to protect the Owner, if in the Construction Manager's or Architect's opinion the representations to the Owner required by Subparagraph 9.4.3 cannot be made. If the Construction Manager or Architect is unable to certify payment in the amount of the Application, the Construction Manager or Architect will notify the Contractor and Owner as provided in Subparagraph 9.4.2. If the Contractor, Construction Manager and Architect cannot agree on a revised amount, the Construction Manager and Architect will promptly issue a Certificate for Payment for the amount for which the Construction Manager and Architect are able to make such representations to the Owner. The Construction Manager or Architect may also decide not to certify payment or, because of subsequently discovered evidence or subsequent observations, may nullify the whole or a part of a Certificate for Payment previously issued, to such extent as may be necessary in the Construction Manager's or Architect's opinion to protect the Owner from loss because of:
>
> .1 defective Work not remedied;
> .2 third party claims filed or reasonable evidence indicating probable filing of such claims;
> .3 failure of the Contractor to make payments properly to Subcontractors or for labor, materials or equipment;
> .4 reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract sum;
> .5 damage to the Owner or another contractor;
> .6 reasonable evidence that the Work will not be completed within the Contract Time, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay; or
> .7 persistent failure to carry out the Work in accordance with the Contract Documents. (emphasis added)

Article 9.5 above, does not require the CM and/or Architect to withhold certification or to withhold funds, the Contract allows them that option should, in their opinion, the Contract balance and/or retainage not be sufficient to complete the Project. In addition, as noted earlier the CM did withhold five percent of Application and Certificate for Payment No. 19 for defective work not remedied.

CSF presents the cost to complete at termination, prepared by McDaniel, to be $428,119.00. They then compare the amount remaining in the Contract at termination and determine that improper payments were made to McDaniel in the amount of

$354,285.00. Finally, they state that the amount of the overpayment should have been replenished to the contract balance.

Our opinion regarding the utilization of Application and Certificate for Payment No. 24 for the calculations used herein has been stated many times before. Had McDaniel performed pursuant to the terms of the Contract by paying subcontractors, material suppliers and equipment suppliers, the payments made in Application and Certificate for Payment Nos. 22, 23R, and 24, totaling $389,918.60 would not have been required. The $389,918.60 would have covered the overpayment identified by CSF on page twenty-nine of their report. It is also important to remember that RLI, through its counsel, authorized joint checks and were aware of the payroll disbursement made to McDaniel in Application and Certificate for Payment No. 23R. The total amounts of payments authorized by or known to RLI in Application and Certificate for Payment Nos. 23R and 24 was $298,623.60.

CSF states on page thirty-one:

> … the Owner had substantial opportunity to call upon the Surety from the time it learned of the deficient work in January 2004, and minimize the costs to repair and complete the work.

The Project record shows that the CM first notified RLI of problems on April 30, 2004 by way of a copy of correspondence sent to McDaniel regarding their failure to complete the Contract work pursuant to the schedule (Exhibit 95). Further, Mr. Dwyer of EDiS states the following in his deposition[37]:

> Q: And what was it that you were looking for Mr. Berry or RLI to do?
> A: Anything.
> Q: When these calls were made, what were you --
> A: Anything. At that point they were doing nothing. All they said they would do is they said they would get involved if McDaniel was defaulted. That's the answer that we got every time we talked to either Berry or Harry Blackburn; it was always we can't do anything until he's defaulted,

[37] See Dwyer deposition, page 146, line 16 to page 147, line 11.

> thank you very much for keeping us informed. That was basically what the conversations ended up being.
> Q: And am I understanding you correctly that that was something that you were told both at this time frame in mid-July but also had been told prior to that?
> A: From David Berry, yes.

According to Mr. Dwyer, the Surety was called upon and RLI had the opportunity to minimize the costs to repair and complete the work, but indicated that they were unable to respond until McDaniel was default terminated.

I. IRSD Claim

We have discussed the IRSD costs to complete McDaniel's Contract in Section IV of this report. On page thirty-two of their report, CSF states that the IRSD costs include in excess of $1,269,000.00 for ductwork, glycol, chilled water piping, fixtures, HVAC equipment and insulation and they then make a comparison to the original schedule of values. As stated earlier, cost comparisons to the original schedule of values are meaningless in that the IRSD cost to complete includes significant demolition, removal, disposal, re-fabrication and re-installation of mechanical and plumbing ductwork, piping and equipment. The costs also likely include labor, material and equipment escalation.

VII. Conclusions

Based on our review of the Project record and the reports submitted by RLI Insurance, we conclude that IRSD did not wrongfully terminate McDaniel's right to continue performance of the Contract and that RLI failed to satisfy its obligation under its bonds. Further, under the terms of the Performance Bond, RLI is obligated to pay IRSD for the cost of correcting McDaniel's defective work; the cost of completion of McDaniel's base Contract work; and the additional direct and indirect costs resulting

from McDaniel's default and RLI's failure to complete or arrange for completion of McDaniel's Contract work. The following is a summary of our findings:

- McDaniel was provided with additional time to perform its work under the Contract through correspondence, schedule updates and revisions.
- McDaniel never provided notice of delay or additional costs pursuant to the terms of the Contract.
- EDiS provided updated and revised schedules throughout the Project without disagreement from McDaniel.
- McDaniel committed to schedule completion dates and failed to meet those dates.
- The PCM report fails to take into account the overall progress of the work and, specifically, lack of progress by McDaniel.
- The CM and Architect properly exercised due diligence with their judgment and discretion when certifying payments under the Contract.
- McDaniel failed to pay their subcontractors and suppliers on the Project with funds received from IRSD as required by the Contract.
- Application and Certificate for Payment Nos. 22, 23R and 24 were used to pay subcontractors, material supplies, equipment suppliers and McDaniel payroll required to complete work necessary to open the school on September 7, 2007. The payments were for bonded obligations of RLI and/or used for the Sussex Central High School Project.
- The percentages of completion reflected on Application and Certificate for Payment Nos. 22, 23R and 24 are not a reflection of the work in place at the date of the payment application but rather generated as an internal accounting computation required to allow payments.
- RLI authorized joint check payments by IRSD following their July 27, 2004 correspondence demanding no additional payments be made to McDaniel.

- There were sufficient funds in the Contract following Application and Certificate for Payment No.21 to complete McDaniel's work.
- IRSD had the right under the Contract to supplement McDaniel's workforce in the penthouses and mechanical room for their repeated failure to complete the work as committed to.
- IRSD was obligated by the Contract to pay certified payment applications and had no approval authority, regarding payment, under the terms of the Contract.
- Zimmer performed work as authorized by IRSD, the CM, the Architect and the Engineer.
- McDaniel was terminated for poor workmanship and failure to provide sufficient manpower following September 7, 2004.
- IRSD incurred costs that were not a part of the McDaniel scope of work because of the failure of McDaniel to provide sufficient manpower to progress the work and RLI's failure to complete the work.

In our opinion, RLI breached its obligations under the Performance Bond and should be held accountable for the costs incurred by IRSD to complete the Mechanical, Plumbing and ATC scope of work on the Sussex Central High School Project.

Submitted by:
FTI / Brower, Kriz and Stynchcomb

B. Keith Hughes
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